

SEQUENCE LISTING

<110> Bayer Pharmaceuticals Corporation
Eveleigh, Deepa
Bigwood, Douglas
Taylor, Ian

<120> EXPRESSION PROFILES FOR COLON CANCER AND METHODS OF USE

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a t g c a a a c c a	t a g c a c a g g c	t a a t t t t t t g	t t g t t t c t t a	a a t a a g a a a c	t t t t t t a t t t	2400
a a a a a a c t a a	a a a c t a g a g g	t g a g a a a t t t	a a a c t a t a a g	c a a g a a g g c a	a a a a t a g t t t	2460
g g a t a t g t a a	a a c a t t t a c t	t t g a c a t a a a	g t t g a t a a a g	a t t t t t t a a t	a a t t t a g a c t	2520
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t a a g g a g t g t	a g c a a c t a c a	g t c t a a a g c t	g g t t t a a t g t	t t t g g c c a a t	g c a c c t a a a g	2640
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 <213> Homo sapiens

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 <212> DNA
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 <212> DNA
 <213> Homo sapiens

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Val Arg Lys Ser Ile Ala Arg Val Leu Thr Val Ile Asn Gln Thr Gln
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Lys Glu Asn Leu Arg Lys Phe Tyr Lys Gly Lys Lys Tyr Lys Pro Leu
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Asp Leu Arg Pro Lys Lys Thr Arg Ala Met Arg Arg Arg Leu Asn Lys
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Glu Asn Leu Asp Cys Pro Glu Leu Ile Glu Ala Phe Leu Asn Ser Gln
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Lys Ala Gly Lys Glu Lys Asp Gly Thr Lys Arg Lys Ser Leu Ser Asp
Page 255

85

90

95

Ser Glu Ser Asp Asp Ser Lys Ser Lys Lys Lys Arg Asp Ala Ala Asp
100 105 110

Lys Pro Arg Gly Phe Ala Arg Gly Leu Asp Pro Glu Arg Ile Ile Gly
115 120 125

Ala Ile Asp Ser Ser Gly Glu Leu Met Phe Leu Met Lys Trp Lys Asp
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Ser Asp Glu Ala Asp Leu Val Leu Ala Lys Glu Ala Asn Met Lys Cys
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Leu Phe Trp Leu Ile Ala Ile Leu Ala Gln Leu Asn Pro Leu Phe Gly
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Val Gly Ser Ser Ala Ala Leu Asp Val Glu Leu Ser Asp Asp Ser Phe
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Pro Pro Glu Asp Phe Gly Ile Val Ser Gly Met Leu Asn Val Lys Trp
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Asp Arg Ile Ala Pro Ala Ser Asn Val Ser His Thr Val Val Leu Arg
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Pro Leu Lys Ala Gly Tyr Phe Asn Phe Thr Ser Ala Thr Ile Thr Tyr
100 105 110

Leu Ala Gln Glu Asp Gly Pro Val Val Ile Gly Ser Thr Ser Ala Pro
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Gly Gln Gly Gly Ile Leu Ala Gln Arg Glu Phe Asp Arg Arg Phe Ser
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 Asn Met Phe Glu Lys Ile His Gln Glu Thr Phe Gly Lys Ser Gly Cys
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 Thr Tyr Lys Asn Phe Gly Asp Gln Pro Asp Ile Arg Cys Pro Ile Pro
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 Arg Gly Ser Ile Gly Phe Leu Tyr Leu Asn Ile Gly Leu Gln Asn Gly
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 900 905 910
 Leu Ile Leu Asn Pro Arg Ser Val Ala Gly Gly Phe Val Tyr Thr Tyr
 915 920 925
 Lys Leu Val Asn Asn Gly Glu Lys Leu Glu Phe Leu His Lys Thr Pro
 930 935 940
 Val Glu Glu Val Pro Ala Ala Ile Ala Pro Phe Gln Gly Arg Val Leu
 945 950 955 960
 Ile Gly Val Gly Lys Leu Leu Arg Val Tyr Asp Leu Gly Lys Lys Lys
 965 970 975
 Leu Leu Arg Lys Cys Glu Asn Lys His Ile Ala Asn Tyr Ile Ser Gly
 980 985 990
 Ile Gln Thr Ile Gly His Arg Val Ile Val Ser Asp Val Gln Glu Ser
 995 1000 1005
 Phe Ile Trp Val Arg Tyr Lys Arg Asn Glu Asn Gln Leu Ile Ile
 1010 1015 1020
 Phe Ala Asp Asp Thr Tyr Pro Arg Trp Val Thr Thr Ala Ser Leu
 1025 1030 1035
 Leu Asp Tyr Asp Thr Val Ala Gly Ala Asp Lys Phe Gly Asn Ile
 1040 1045 1050
 Cys Val Val Arg Leu Pro Pro Asn Thr Asn Asp Glu Val Asp Glu
 1055 1060 1065

Asp Pro Thr Gly Asn Lys Ala Leu Trp Asp Arg Gly Leu Leu Asn
1070 1075 1080

Gly Ala Ser Gln Lys Ala Glu Val Ile Met Asn Tyr His Val Gly
1085 1090 1095

Glu Thr Val Leu Ser Leu Gln Lys Thr Thr Leu Ile Pro Gly Gly
1100 1105 1110

Ser Glu Ser Leu Val Tyr Thr Thr Leu Ser Gly Gly Ile Gly Ile
1115 1120 1125

Leu Val Pro Phe Thr Ser His Glu Asp His Asp Phe Phe Gln His
1130 1135 1140

Val Glu Met His Leu Arg Ser Glu His Pro Pro Leu Cys Gly Arg
1145 1150 1155

Asp His Leu Ser Phe Arg Ser Tyr Tyr Phe Pro Val Lys Asn Val
1160 1165 1170

Ile Asp Gly Asp Leu Cys Glu Gln Phe Asn Ser Met Glu Pro Asn
1175 1180 1185

Lys Gln Lys Asn Val Ser Glu Glu Leu Asp Arg Thr Pro Pro Glu
1190 1195 1200

Val Ser Lys Lys Leu Glu Asp Ile Arg Thr Arg Tyr Ala Phe
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<210> 102
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<212> PRT
<213> Homo sapiens

<400> 102

Met Ala Pro His Arg Pro Ala Pro Ala Leu Leu Cys Ala Leu Ser Leu
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Ala Leu Cys Ala Leu Ser Leu Pro Val Arg Ala Ala Thr Ala Ser Arg
20 25 30

Gly Ala Ser Gln Ala Gly Ala Pro Gln Gly Arg Val Pro Glu Ala Arg
35 40 45

Pro Asn Ser Met Val Val Glu His Pro Glu Phe Leu Lys Ala Gly Lys
50 55 60

Glu Pro Gly Leu Gln Ile Trp Arg Val Glu Lys Phe Asp Leu Val Pro
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65		70		75		80
Val	Pro	Thr	Asn	Leu	Tyr	Val
			85			
				Phe	Thr	Val
				90		
					Gly	Val
					Asp	
					Ala	
					Tyr	
					95	
Ile	Leu	Lys	Thr	Val	Gln	Leu
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				Arg	Asn	Leu
				105		
					Gly	Leu
					Asn	Val
					110	
His	Tyr	Trp	Leu	Gly	Asn	Glu
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				Cys	Ser	Gln
				120		
					Asp	Glu
					125	
					Ser	Gly
					Ala	Ala
Ala	Ile	Phe	Thr	Val	Gln	Leu
					135	
				Asp	Asp	Tyr
						Leu
					Asn	Gly
					140	
					Arg	Ala
					Val	
Gln	His	Arg	Glu	Val	Gln	Gly
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				Phe	Glu	Ser
						Ala
					155	
					Thr	Phe
						Leu
						Gly
						Tyr
						160
Phe	Lys	Ser	Gly	Leu	Lys	Tyr
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					Lys	Lys
						Gly
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					Gly	Gly
						Val
						Ala
						Ser
						Gly
						Phe
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						Val
						Gln
						Arg
						Leu
						Phe
						Gln
						Val
						190
Lys	Gly	Arg	Arg	Val	Val	Arg
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						Thr
						Glu
						Val
						Pro
						Val
						205
						Ser
						Trp
						Glu
Ser	Phe	Asn	Asn	Gly	Asp	Cys
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						Phe
						Ile
						Leu
						Asp
						Leu
						Gly
						Asn
						Asn
						Ile
						220
His	Gln	Trp	Cys	Gly	Ser	Asn
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						Ser
						Asn
						Arg
						Tyr
						235
						Glu
						Arg
						Leu
						Lys
						Ala
						240
Thr	Gln	Val	Ser	Lys	Gly	Ile
						245
						Arg
						Asp
						Asn
						Glu
						Arg
						Ser
						Gly
						Arg
						Ala
						255
Arg	Val	His	Val	Ser	Glu	Glu
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						Gly
						Thr
						265
						Glu
						Pro
						Glu
						Ala
						Met
						270
Val	Leu	Gly	Pro	Lys	Pro	Ala
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						Pro
						Ala
						Gly
						Thr
						Glu
						Asp
						Thr
						Ala
						285
Lys	Glu	Asp	Ala	Ala	Asn	Arg
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						Lys
						Leu
						Ala
						Lys
						Leu
						Tyr
						Lys
						Val
						Ser
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Asn	Gly	Ala	Gly	Thr	Met	Ser
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						Val
						Ser
						Leu
						Val
						315
						Ala
						Asp
						Glu
						Asn
						Pro
						320
Phe	Ala	Gln	Gly	Ala	Leu	Lys
						Ser
						Glu
						Asp
						Cys
						Phe
						Ile
						Leu
						Asp
						His

325

330

335

Gly Lys Asp Gly Lys Ile Phe Val Trp Lys Gly Lys Gln Ala Asn Thr
 340 345 350

Glu Glu Arg Lys Ala Ala Leu Lys Thr Ala Ser Asp Phe Ile Thr Lys
 355 360 365

Met Asp Tyr Pro Lys Gln Thr Gln Val Ser Val Leu Pro Glu Gly Gly
 370 375 380

Glu Thr Pro Leu Phe Lys Gln Phe Phe Lys Asn Trp Arg Asp Pro Asp
 385 390 395 400

Gln Thr Asp Gly Leu Gly Leu Ser Tyr Leu Ser Ser His Ile Ala Asn
 405 410 415

Val Glu Arg Val Pro Phe Asp Ala Ala Thr Leu His Thr Ser Thr Ala
 420 425 430

Met Ala Ala Gln His Gly Met Asp Asp Asp Gly Thr Gly Gln Lys Gln
 435 440 445

Ile Trp Arg Ile Glu Gly Ser Asn Lys Val Pro Val Asp Pro Ala Thr
 450 455 460

Tyr Gly Gln Phe Tyr Gly Gly Asp Ser Tyr Ile Ile Leu Tyr Asn Tyr
 465 470 475 480

Arg His Gly Gly Arg Gln Gly Gln Ile Ile Tyr Asn Trp Gln Gly Ala
 485 490 495

Gln Ser Thr Gln Asp Glu Val Ala Ala Ser Ala Ile Leu Thr Ala Gln
 500 505 510

Leu Asp Glu Glu Leu Gly Gly Thr Pro Val Gln Ser Arg Val Val Gln
 515 520 525

Gly Lys Glu Pro Ala His Leu Met Ser Leu Phe Gly Gly Lys Pro Met
 530 535 540

Ile Ile Tyr Lys Gly Gly Thr Ser Arg Glu Gly Gly Gln Thr Ala Pro
 545 550 555 560

Ala Ser Thr Arg Leu Phe Gln Val Arg Ala Asn Ser Ala Gly Ala Thr
 565 570 575

Arg Ala Val Glu Val Leu Pro Lys Ala Gly Ala Leu Asn Ser Asn Asp
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580

585

590

Ala Phe Val Leu Lys Thr Pro Ser Ala Ala Tyr Leu Trp Val Gly Thr
595 600 605

Gly Ala Ser Glu Ala Glu Lys Thr Gly Ala Gln Glu Leu Leu Arg Val
610 615 620

Leu Arg Ala Gln Pro Val Gln Val Ala Glu Gly Ser Glu Pro Asp Gly
625 630 635 640

Phe Trp Glu Ala Leu Gly Gly Lys Ala Ala Tyr Arg Thr Ser Pro Arg
645 650 655

Leu Lys Asp Lys Lys Met Asp Ala His Pro Pro Arg Leu Phe Ala Cys
660 665 670

Ser Asn Lys Ile Gly Arg Phe Val Ile Glu Glu Val Pro Gly Glu Leu
675 680 685

Met Gln Glu Asp Leu Ala Thr Asp Asp Val Met Leu Leu Asp Thr Trp
690 695 700

Asp Gln Val Phe Val Trp Val Gly Lys Asp Ser Gln Glu Glu Glu Lys
705 710 715 720

Thr Glu Ala Leu Thr Ser Ala Lys Arg Tyr Ile Glu Thr Asp Pro Ala
725 730 735

Asn Arg Asp Arg Arg Thr Pro Ile Thr Val Val Lys Gln Gly Phe Glu
740 745 750

Pro Pro Ser Phe Val Gly Trp Phe Leu Gly Trp Asp Asp Asp Tyr Trp
755 760 765

Ser Val Asp Pro Leu Asp Arg Ala Met Ala Glu Leu Ala Ala
770 775 780

<210> 103
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<212> PRT
<213> Homo sapiens

<400> 103

Met Pro Phe Ser Asn Ser His Asn Ala Leu Lys Leu Arg Phe Pro Ala
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Glu Asp Glu Phe Pro Asp Leu Ser Ala His Asn Asn His Met Ala Lys
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Val Leu Thr Pro Glu Leu Tyr Ala Glu Leu Arg Ala Lys Ser Thr Pro
35 40 45
Ser Gly Phe Thr Leu Asp Asp Val Ile Gln Thr Gly Val Asp Asn Pro
50 55 60
Gly His Pro Tyr Ile Met Thr Val Gly Cys Val Ala Gly Asp Glu Glu
65 70 75 80
Ser Tyr Glu Val Phe Lys Asp Leu Phe Asp Pro Ile Ile Glu Asp Arg
85 90 95
His Gly Gly Tyr Lys Pro Ser Asp Glu His Lys Thr Asp Leu Asn Pro
100 105 110
Asp Asn Leu Gln Gly Gly Asp Asp Leu Asp Pro Asn Tyr Val Leu Ser
115 120 125
Ser Arg Val Arg Thr Gly Arg Ser Ile Arg Gly Phe Cys Leu Pro Pro
130 135 140
His Cys Ser Arg Gly Glu Arg Arg Ala Ile Glu Lys Leu Ala Val Glu
145 150 155 160
Ala Leu Ser Ser Leu Asp Gly Asp Leu Ala Gly Arg Tyr Tyr Ala Leu
165 170 175
Lys Ser Met Thr Glu Ala Glu Gln Gln Gln Leu Ile Asp Asp His Phe
180 185 190
Leu Phe Asp Lys Pro Val Ser Pro Leu Leu Leu Ala Ser Gly Met Ala
195 200 205
Arg Asp Trp Pro Asp Ala Arg Gly Ile Trp His Asn Asp Asn Lys Thr
210 215 220
Phe Leu Val Trp Val Asn Glu Glu Asp His Leu Arg Val Ile Ser Met
225 230 235 240
Gln Lys Gly Gly Asn Met Lys Glu Val Phe Thr Arg Phe Cys Thr Gly
245 250 255
Leu Thr Gln Ile Glu Thr Leu Phe Lys Ser Lys Asp Tyr Glu Phe Met
260 265 270
Trp Asn Pro His Leu Gly Tyr Ile Leu Thr Cys Pro Ser Asn Leu Gly
275 280 285

Thr Gly Leu Arg Ala Gly Val His Ile Lys Leu Pro Asn Leu Gly Lys
290 295 300

His Glu Lys Phe Ser Glu Val Leu Lys Arg Leu Arg Leu Gln Lys Arg
305 310 315 320

Gly Thr Gly Gly Val Asp Thr Ala Ala Val Gly Gly Val Phe Asp Val
325 330 335

Ser Asn Ala Asp Arg Leu Gly Phe Ser Glu Val Glu Leu Val Gln Met
340 345 350

Val Val Asp Gly Val Lys Leu Leu Ile Glu Met Glu Gln Arg Leu Glu
355 360 365

Gln Gly Gln Ala Ile Asp Asp Leu Met Pro Ala Gln Lys
370 375 380

<210> 104
<211> 277
<212> PRT
<213> Homo sapiens

<400> 104

Met Phe Pro Phe Tyr Ser Cys Trp Arg Thr Gly Leu Leu Leu Leu Leu
1 5 10 15

Leu Ala Val Ala Val Arg Glu Ser Trp Gln Thr Glu Glu Lys Thr Cys
20 25 30

Asp Leu Val Gly Glu Lys Gly Lys Glu Ser Glu Lys Glu Leu Ala Leu
35 40 45

Val Lys Arg Leu Lys Pro Leu Phe Asn Lys Ser Phe Glu Ser Thr Val
50 55 60

Gly Gln Gly Ser Asp Thr Tyr Ile Tyr Ile Phe Arg Val Cys Arg Glu
65 70 75 80

Ala Gly Asn His Thr Ser Gly Ala Gly Leu Val Gln Ile Asn Lys Ser
85 90 95

Asn Gly Lys Glu Thr Val Val Gly Arg Leu Asn Glu Thr His Ile Phe
100 105 110

Asn Gly Ser Asn Trp Ile Met Leu Ile Tyr Lys Gly Gly Asp Glu Tyr
115 120 125

Asp Asn His Cys Gly Lys Glu Gln Arg Arg Ala Val Val Met Ile Ser
 130 135 140

Cys Asn Arg His Thr Leu Ala Asp Asn Phe Asn Pro Val Ser Glu Glu
 145 150 155 160

Arg Gly Lys Val Gln Asp Cys Phe Tyr Leu Phe Glu Met Asp Ser Ser
 165 170 175

Leu Ala Cys Ser Pro Glu Ile Ser His Leu Ser Val Gly Ser Ile Leu
 180 185 190

Leu Val Thr Phe Ala Ser Leu Val Ala Val Tyr Val Val Gly Gly Phe
 195 200 205

Leu Tyr Gln Arg Leu Val Val Gly Ala Lys Gly Met Glu Gln Phe Pro
 210 215 220

His Leu Ala Phe Trp Gln Asp Leu Gly Asn Leu Val Ala Asp Gly Cys
 225 230 235 240

Asp Phe Val Cys Arg Ser Lys Pro Arg Asn Val Pro Ala Ala Tyr Arg
 245 250 255

Gly Val Gly Asp Asp Gln Leu Gly Glu Glu Ser Glu Glu Arg Asp Asp
 260 265 270

His Leu Leu Pro Met
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<210> 105
 <211> 864
 <212> PRT
 <213> Homo sapiens

<400> 105

Gln Val Gln His Gly Ser Asn Val Asn Ile His Arg Leu Val Glu Gly
 1 5 10 15

Asn Val Val Ile Trp Glu Asn Ala Ser Thr Pro Leu Tyr Thr Gly Ala
 20 25 30

Ile Val Thr Asn Asn Asp Gly Pro Tyr Met Ala Tyr Val Glu Val Leu
 35 40 45

Gly Asp Pro Asn Leu Gln Phe Phe Ile Lys Ser Gly Asp Ala Trp Val
 50 55 60

Thr Leu Ser Glu His Glu Tyr Leu Ala Lys Leu Gln Glu Ile Arg Gln
65 70 75 80

Ala Val His Ile Glu Ser Val Phe Ser Leu Asn Met Ala Phe Gln Leu
85 90 95

Glu Asn Asn Lys Tyr Glu Val Glu Thr His Ala Lys Asn Gly Ala Asn
100 105 110

Met Val Thr Phe Ile Pro Arg Asn Gly His Ile Cys Lys Met Val Tyr
115 120 125

His Lys Asn Val Arg Ile Tyr Lys Ala Thr Gly Asn Asp Thr Val Thr
130 135 140

Ser Val Val Gly Phe Phe Arg Gly Leu Arg Leu Leu Ile Asn Val
145 150 155 160

Phe Ser Ile Asp Asp Asn Gly Met Met Ser Asn Arg Tyr Phe Gln His
165 170 175

Val Asp Asp Lys Tyr Val Pro Ile Ser Gln Lys Asn Tyr Glu Thr Gly
180 185 190

Ile Val Lys Leu Lys Asp Tyr Lys His Ala Tyr His Pro Val Asp Leu
195 200 205

Asp Ile Lys Asp Ile Asp Tyr Thr Met Phe His Leu Ala Asp Ala Thr
210 215 220

Tyr His Glu Pro Cys Phe Lys Ile Ile Pro Asn Thr Gly Phe Cys Ile
225 230 235 240

Thr Lys Leu Phe Asp Gly Asp Gln Val Leu Tyr Glu Ser Phe Asn Pro
245 250 255

Leu Ile His Cys Ile Asn Glu Val His Ile Tyr Asp Arg Asn Asn Gly
260 265 270

Ser Ile Ile Cys Leu His Leu Asn Tyr Ser Pro Pro Ser Tyr Lys Ala
275 280 285

Tyr Leu Val Leu Lys Asp Thr Gly Trp Glu Ala Thr Thr His Pro Leu
290 295 300

Leu Glu Glu Lys Ile Glu Glu Leu Gln Asp Gln Arg Ala Cys Glu Leu
305 310 315 320

Asp Val Asn Phe Ile Ser Asp Lys Asp Leu Tyr Val Ala Ala Leu Thr
 325 330 335
 Asn Ala Asp Leu Asn Tyr Thr Met Val Thr Pro Arg Pro His Arg Asp
 340 345 350
 Val Ile Arg Val Ser Asp Gly Ser Glu Val Leu Trp Tyr Tyr Glu Gly
 355 360 365
 Leu Asp Asn Phe Leu Val Cys Ala Trp Ile Tyr Val Ser Asp Gly Val
 370 375 380
 Ala Ser Leu Val His Leu Arg Ile Lys Asp Arg Ile Pro Ala Asn Asn
 385 390 395 400
 Asp Ile Tyr Val Leu Lys Gly Asp Leu Tyr Trp Thr Arg Ile Thr Lys
 405 410 415
 Ile Gln Phe Thr Gln Glu Ile Lys Arg Leu Val Lys Lys Ser Lys Lys
 420 425 430
 Lys Leu Ala Pro Ile Thr Glu Glu Asp Ser Asp Lys His Asp Glu Pro
 435 440 445
 Pro Glu Gly Pro Gly Ala Ser Gly Leu Pro Pro Lys Ala Pro Gly Asp
 450 455 460
 Lys Glu Gly Ser Glu Gly His Lys Gly Pro Ser Lys Gly Ser Asp Ser
 465 470 475 480
 Ser Lys Glu Gly Lys Lys Pro Gly Ser Gly Lys Lys Pro Gly Pro Ala
 485 490 495
 Arg Glu His Lys Pro Ser Lys Ile Pro Thr Leu Ser Lys Lys Pro Ser
 500 505 510
 Gly Pro Lys Asp Pro Lys His Pro Arg Asp Pro Lys Glu Pro Arg Lys
 515 520 525
 Ser Lys Ser Pro Arg Thr Ala Ser Pro Thr Arg Arg Pro Ser Pro Lys
 530 535 540
 Leu Pro Gln Leu Ser Lys Leu Pro Lys Ser Thr Ser Pro Arg Ser Pro
 545 550 555 560
 Pro Pro Pro Thr Arg Pro Ser Ser Pro Glu Arg Pro Glu Gly Thr Lys
 565 570 575

Ile Ile Lys Thr Ser Lys Pro Pro Ser Pro Lys Pro Pro Phe Asp Pro
 580 585 590
 Ser Phe Lys Glu Lys Phe Tyr Asp Asp Tyr Ser Lys Ala Ala Ser Arg
 595 600 605
 Ser Lys Glu Thr Lys Thr Thr Val Val Leu Asp Glu Ser Phe Glu Ser
 610 615 620
 Ile Leu Lys Glu Thr Leu Pro Glu Thr Pro Gly Thr Pro Phe Thr Thr
 625 630 635 640
 Pro Arg Pro Val Pro Pro Lys Arg Pro Arg Thr Pro Glu Ser Pro Phe
 645 650 655
 Glu Pro Pro Lys Asp Pro Asp Ser Pro Ser Thr Ser Pro Ser Glu Phe
 660 665 670
 Phe Thr Pro Pro Glu Ser Lys Arg Thr Arg Phe His Glu Thr Pro Ala
 675 680 685
 Asp Thr Pro Leu Pro Asp Val Thr Ala Glu Leu Phe Lys Glu Pro Asp
 690 695 700
 Val Thr Ala Glu Thr Lys Ser Pro Asp Glu Ala Met Lys Arg Pro Arg
 705 710 715 720
 Ser Pro Ser Glu Tyr Glu Asp Thr Ser Pro Gly Asp Tyr Pro Ser Leu
 725 730 735
 Pro Met Lys Arg His Arg Leu Glu Arg Leu Arg Leu Thr Thr Thr Glu
 740 745 750
 Met Glu Thr Asp Pro Gly Arg Met Ala Lys Asp Ala Ser Gly Lys Pro
 755 760 765
 Val Lys Leu Lys Arg Ser Lys Ser Phe Asp Asp Leu Thr Thr Val Glu
 770 775 780
 Leu Ala Pro Glu Pro Lys Ala Ser Arg Ile Val Val Asp Asp Glu Gly
 785 790 795 800
 Thr Glu Ala Asp Asp Glu Glu Thr His Pro Pro Glu Glu Arg Gln Lys
 805 810 815
 Thr Glu Val Arg Arg Arg Arg Pro Pro Lys Lys Pro Ser Lys Ser Pro
 820 825 830

Arg Pro Ser Lys Pro Lys Lys Pro Lys Lys Pro Asp Ser Ala Tyr Ile
835 840 845

Pro Ser Ile Leu Ala Ile Leu Val Val Ser Leu Ile Val Gly Ile Leu
850 855 860

<210> 106
<211> 183
<212> PRT
<213> Homo sapiens

<400> 106

Met Ala Ser Asn Lys Thr Thr Leu Gln Lys Met Gly Lys Lys Gln Asn
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Gly Lys Ser Lys Lys Val Glu Glu Ala Glu Pro Glu Glu Phe Val Val
20 25 30

Glu Lys Val Leu Asp Arg Arg Val Val Asn Gly Lys Val Glu Tyr Phe
35 40 45

Leu Lys Trp Lys Gly Phe Thr Asp Ala Asp Asn Thr Trp Glu Pro Glu
50 55 60

Glu Asn Leu Asp Cys Pro Glu Leu Ile Glu Ala Phe Leu Asn Ser Gln
65 70 75 80

Lys Ala Gly Lys Glu Lys Asp Gly Thr Lys Arg Lys Ser Leu Ser Asp
85 90 95

Ser Glu Ser Asp Asp Ser Lys Ser Lys Lys Lys Arg Asp Ala Ala Asp
100 105 110

Lys Pro Arg Gly Phe Ala Arg Gly Leu Asp Pro Glu Arg Ile Ile Gly
115 120 125

Ala Ile Asp Ser Ser Gly Glu Leu Met Phe Leu Met Lys Trp Lys Asp
130 135 140

Ser Asp Glu Ala Asp Leu Val Leu Ala Lys Glu Ala Asn Met Lys Cys
145 150 155 160

Pro Gln Ile Val Ile Ala Phe Tyr Glu Glu Arg Leu Thr Trp His Ser
165 170 175

Cys Pro Glu Asp Glu Ala Gln
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<210> 107

<211> 1410
<212> PRT
<213> Homo sapiens

<400> 107

Met Asp Ile Tyr Asp Thr Gln Thr Leu Gly val val val Phe Gly Gly
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Phe Met val val Ser Ala Ile Gly Ile Phe Leu val Ser Thr Phe Ser
20 25 30

Met Lys Glu Thr Ser Tyr Glu Glu Ala Leu Ala Asn Gln Arg Lys Glu
35 40 45

Met Ala Lys Thr His His Gln Lys val Glu Lys Lys Lys Lys Glu Lys
50 55 60

Thr val Glu Lys Lys Gly Lys Thr Lys Lys Lys Glu Glu Lys Pro Asn
65 70 75 80

Gly Lys Ile Pro Asp His Asp Pro Ala Pro Asn val Thr val Leu Leu
85 90 95

Arg Glu Pro val Arg Ala Pro Ala val Ala val Ala Pro Thr Pro val
100 105 110

Gln Pro Pro Ile Ile val Ala Pro val Ala Thr val Pro Ala Met Pro
115 120 125

Gln Glu Lys Leu Ala Ser Ser Pro Lys Asp Lys Lys Lys Lys Glu Lys
130 135 140

Lys val Ala Lys val Glu Pro Ala val Ser Ser val val Asn Ser Ile
145 150 155 160

Gln val Leu Thr Ser Lys Ala Ala Ile Leu Glu Thr Ala Pro Lys Glu
165 170 175

val Pro Met val val val Pro Pro val Gly Ala Lys Gly Asn Thr Pro
180 185 190

Ala Thr Gly Thr Thr Gln Gly Lys Lys Ala Glu Gly Thr Gln Asn Gln
195 200 205

Ser Lys Lys Ala Glu Gly Ala Pro Asn Gln Gly Arg Lys Ala Glu Gly
210 215 220

Thr Pro Asn Gln Gly Lys Lys Thr Glu Gly Thr Pro Asn Gln Gly Lys
225 230 235 240

Lys Ala Glu Gly Thr Pro Asn Gln Gly Lys Lys Ala Glu Gly Thr Pro
245 250 255

Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys Lys Val
260 265 270

Asp Thr Thr Pro Asn Gln Gly Lys Lys Val Glu Gly Ala Pro Thr Gln
275 280 285

Gly Arg Lys Ala Glu Gly Ala Gln Asn Gln Ala Lys Lys Val Glu Gly
290 295 300

Ala Gln Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys
305 310 315 320

Lys Gly Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln
325 330 335

Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala
340 345 350

Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln
355 360 365

Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys Lys Ser Glu Gly
370 375 380

Ala Gln Asn Gln Gly Lys Lys Val Glu Gly Ala Gln Asn Gln Gly Lys
385 390 395 400

Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln
405 410 415

Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala
420 425 430

Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln
435 440 445

Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala Glu Gly
450 455 460

Ala Gln Asn Gln Gly Lys Lys Val Glu Gly Ala Gln Asn Gln Gly Lys
465 470 475 480

Lys Ala Glu Gly Ala Gln Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln
485 490 495

Asn Gln Gly Lys Lys Ala Glu Gly Ala Gln Asn Gln Gly Gln Lys Gly
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 Glu Gly Ala Gln Asn Gln Gly Lys Lys Thr Glu Gly Ala Gln Gly Lys
 515 520 525
 Lys Ala Glu Arg Ser Pro Asn Gln Gly Lys Lys Gly Glu Gly Ala Pro
 530 535 540
 Ile Gln Gly Lys Lys Ala Asp Ser Val Ala Asn Gln Gly Thr Lys Val
 545 550 555 560
 Glu Gly Ile Thr Asn Gln Gly Lys Lys Ala Glu Gly Ser Pro Ser Glu
 565 570 575
 Gly Lys Lys Ala Glu Gly Ser Pro Asn Gln Gly Lys Lys Ala Asp Ala
 580 585 590
 Ala Ala Asn Gln Gly Lys Lys Thr Glu Ser Ala Ser Val Gln Gly Arg
 595 600 605
 Asn Thr Asp Val Ala Gln Ser Pro Glu Ala Pro Lys Gln Glu Ala Pro
 610 615 620
 Ala Lys Lys Lys Ser Gly Ser Lys Lys Lys Gly Glu Pro Gly Pro Pro
 625 630 635 640
 Asp Ala Asp Gly Pro Leu Tyr Leu Pro Tyr Lys Thr Leu Val Ser Thr
 645 650 655
 Val Gly Ser Met Val Phe Asn Glu Gly Glu Ala Gln Arg Leu Ile Glu
 660 665 670
 Ile Leu Ser Glu Lys Ala Gly Ile Ile Gln Asp Thr Trp His Lys Ala
 675 680 685
 Thr Gln Lys Gly Asp Pro Val Ala Ile Leu Lys Arg Gln Leu Glu Glu
 690 695 700
 Lys Glu Lys Leu Leu Ala Thr Glu Gln Glu Asp Ala Ala Val Ala Lys
 705 710 715 720
 Ser Lys Leu Arg Glu Leu Asn Lys Glu Met Ala Ala Glu Lys Ala Lys
 725 730 735
 Ala Ala Ala Gly Glu Ala Lys Val Lys Lys Gln Leu Val Ala Arg Glu
 740 745 750

Gln Glu Ile Thr Ala Val Gln Ala Arg Met Gln Ala Ser Tyr Arg Glu
755 760 765

His Val Lys Glu Val Gln Gln Leu Gln Gly Lys Ile Arg Thr Leu Gln
770 775 780

Glu Gln Leu Glu Asn Gly Pro Asn Thr Gln Leu Ala Arg Leu Gln Gln
785 790 795 800

Glu Asn Ser Ile Leu Arg Asp Ala Leu Asn Gln Ala Thr Ser Gln Val
805 810 815

Glu Ser Lys Gln Asn Ala Glu Leu Ala Lys Leu Arg Gln Glu Leu Ser
820 825 830

Lys Val Ser Lys Glu Leu Val Glu Lys Ser Glu Ala Val Arg Gln Asp
835 840 845

Glu Gln Gln Arg Lys Ala Leu Glu Ala Lys Ala Ala Ala Phe Glu Lys
850 855 860

Gln Val Leu Gln Leu Gln Ala Ser His Arg Glu Ser Glu Glu Ala Leu
865 870 875 880

Gln Lys Arg Leu Asp Glu Val Ser Arg Glu Leu Cys His Thr Gln Ser
885 890 895

Ser His Ala Ser Leu Arg Ala Asp Ala Glu Lys Ala Gln Glu Gln Gln
900 905 910

Gln Gln Met Ala Glu Leu His Ser Lys Leu Gln Ser Ser Glu Ala Glu
915 920 925

Val Arg Ser Lys Cys Glu Glu Leu Ser Gly Leu His Gly Gln Leu Gln
930 935 940

Glu Ala Arg Ala Glu Asn Ser Gln Leu Thr Glu Arg Ile Arg Ser Ile
945 950 955 960

Glu Ala Leu Leu Glu Ala Gly Gln Ala Arg Asp Ala Gln Asp Val Gln
965 970 975

Ala Ser Gln Ala Glu Ala Asp Gln Gln Gln Thr Arg Leu Lys Glu Leu
980 985 990

Glu Ser Gln Val Ser Gly Leu Glu Lys Glu Ala Ile Glu Leu Arg Glu
995 1000 1005

Ala Val Glu Gln Gln Lys Val Lys Asn Asn Asp Leu Arg Glu Lys
 1010 1015 1020
 Asn Trp Lys Ala Met Glu Ala Leu Ala Thr Ala Glu Gln Ala Cys
 1025 1030 1035
 Lys Glu Lys Leu Leu Ser Leu Thr Gln Ala Lys Glu Glu Ser Glu
 1040 1045 1050
 Lys Gln Leu Cys Leu Ile Glu Ala Gln Thr Met Glu Ala Leu Leu
 1055 1060 1065
 Ala Leu Leu Pro Glu Leu Ser Val Leu Ala Gln Gln Asn Tyr Thr
 1070 1075 1080
 Glu Trp Leu Gln Asp Leu Lys Glu Lys Gly Pro Thr Leu Leu Lys
 1085 1090 1095
 His Pro Pro Ala Pro Ala Glu Pro Ser Ser Asp Leu Ala Ser Lys
 1100 1105 1110
 Leu Arg Glu Ala Glu Glu Thr Gln Ser Thr Leu Gln Ala Glu Cys
 1115 1120 1125
 Asp Gln Tyr Arg Ser Ile Leu Ala Glu Thr Glu Gly Met Leu Arg
 1130 1135 1140
 Asp Leu Gln Lys Ser Val Glu Glu Glu Glu Gln Val Trp Arg Ala
 1145 1150 1155
 Lys Val Gly Ala Ala Glu Glu Glu Leu Gln Lys Ser Arg Val Thr
 1160 1165 1170
 Val Lys His Leu Glu Glu Ile Val Glu Lys Leu Lys Gly Glu Leu
 1175 1180 1185
 Glu Ser Ser Asp Gln Val Arg Glu His Thr Ser His Leu Glu Ala
 1190 1195 1200
 Glu Leu Glu Lys His Met Ala Ala Ala Ser Ala Glu Cys Gln Asn
 1205 1210 1215
 Tyr Ala Lys Glu Val Ala Gly Leu Arg Gln Leu Leu Leu Glu Ser
 1220 1225 1230
 Gln Ser Gln Leu Asp Ala Ala Lys Ser Glu Ala Gln Lys Gln Ser
 1235 1240 1245

Asp Glu Leu Ala Leu Val Arg Gln Gln Leu Ser Glu Met Lys Ser
1250 1255 1260

His Val Glu Asp Gly Asp Ile Ala Gly Ala Pro Ala Ser Ser Pro
1265 1270 1275

Glu Ala Pro Pro Ala Glu Gln Asp Pro Val Gln Leu Lys Thr Gln
1280 1285 1290

Leu Glu Trp Thr Glu Ala Ile Leu Glu Asp Glu Gln Thr Gln Arg
1295 1300 1305

Gln Lys Leu Thr Ala Glu Phe Glu Glu Ala Gln Thr Ser Ala Cys
1310 1315 1320

Arg Leu Gln Glu Glu Leu Glu Lys Leu Arg Thr Ala Gly Pro Leu
1325 1330 1335

Glu Ser Ser Glu Thr Glu Glu Ala Ser Gln Leu Lys Glu Arg Leu
1340 1345 1350

Glu Lys Glu Lys Lys Leu Thr Ser Asp Leu Gly Arg Ala Ala Thr
1355 1360 1365

Arg Leu Gln Glu Leu Leu Lys Thr Thr Gln Glu Gln Leu Ala Arg
1370 1375 1380

Glu Lys Asp Thr Val Lys Lys Leu Gln Glu Gln Leu Glu Lys Ala
1385 1390 1395

Glu Asp Gly Ser Ser Ser Lys Glu Gly Thr Ser Val
1400 1405 1410

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<213> Homo sapiens
<400> 108

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20 25 30

Ile Val Thr Asn Asn Asp Gly Pro Tyr Met Ala Tyr Val Glu Val Leu
35 40 45

Gly Asp Pro Asn Leu Gln Phe Phe Ile Lys Ser Gly Asp Ala Trp Val
 50 55 60

Thr Leu Ser Glu His Glu Tyr Leu Ala Lys Leu Gln Glu Ile Arg Gln
 65 70 75 80

Ala Val His Ile Glu Ser Val Phe Ser Leu Asn Met Ala Phe Gln Leu
 85 90 95

Glu Asn Asn Lys Tyr Glu Val Glu Thr His Ala Lys Asn Gly Ala Asn
 100 105 110

Met Val Thr Phe Ile Pro Arg Asn Gly His Ile Cys Lys Met Val Tyr
 115 120 125

His Lys Asn Val Arg Ile Tyr Lys Ala Thr Gly Asn Asp Thr Val Thr
 130 135 140

Ser Val Val Gly Phe Phe Arg Gly Leu Arg Leu Leu Leu Ile Asn Val
 145 150 155 160

Phe Ser Ile Asp Asp Asn Gly Met Met Ser Asn Arg Tyr Phe Gln His
 165 170 175

Val Asp Asp Lys Tyr Val Pro Ile Ser Gln Lys Asn Tyr Glu Thr Gly
 180 185 190

Ile Val Lys Leu Lys Asp Tyr Lys His Ala Tyr His Pro Val Asp Leu
 195 200 205

Asp Ile Lys Asp Ile Asp Tyr Thr Met Phe His Leu Ala Asp Ala Thr
 210 215 220

Tyr His Glu Pro Cys Phe Lys Ile Ile Pro Asn Thr Gly Phe Cys Ile
 225 230 235 240

Thr Lys Leu Phe Asp Gly Asp Gln Val Leu Tyr Glu Ser Phe Asn Pro
 245 250 255

Leu Ile His Cys Ile Asn Glu Val His Ile Tyr Asp Arg Asn Asn Gly
 260 265 270

Ser Ile Ile Cys Leu His Leu Asn Tyr Ser Pro Pro Ser Tyr Lys Ala
 275 280 285

Tyr Leu Val Leu Lys Asp Thr Gly Trp Glu Ala Thr Thr His Pro Leu
 290 295 300

Leu Glu Glu Lys Ile Glu Glu Leu Gln Asp Gln Arg Ala Cys Glu Leu
 305 310 315 320
 Asp Val Asn Phe Ile Ser Asp Lys Asp Leu Tyr Val Ala Ala Leu Thr
 325 330 335
 Asn Ala Asp Leu Asn Tyr Thr Met Val Thr Pro Arg Pro His Arg Asp
 340 345 350
 Val Ile Arg Val Ser Asp Gly Ser Glu Val Leu Trp Tyr Tyr Glu Gly
 355 360 365
 Leu Asp Asn Phe Leu Val Cys Ala Trp Ile Tyr Val Ser Asp Gly Val
 370 375 380
 Ala Ser Leu Val His Leu Arg Ile Lys Asp Arg Ile Pro Ala Asn Asn
 385 390 395 400
 Asp Ile Tyr Val Leu Lys Gly Asp Leu Tyr Trp Thr Arg Ile Thr Lys
 405 410 415
 Ile Gln Phe Thr Gln Glu Ile Lys Arg Leu Val Lys Lys Ser Lys Lys
 420 425 430
 Lys Leu Ala Pro Ile Thr Glu Glu Asp Ser Asp Lys His Asp Glu Pro
 435 440 445
 Pro Glu Gly Pro Gly Ala Ser Gly Leu Pro Pro Lys Ala Pro Gly Asp
 450 455 460
 Lys Glu Gly Ser Glu Gly His Lys Gly Pro Ser Lys Gly Ser Asp Ser
 465 470 475 480
 Ser Lys Glu Gly Lys Lys Pro Gly Ser Gly Lys Lys Pro Gly Pro Ala
 485 490 495
 Arg Glu His Lys Pro Ser Lys Ile Pro Thr Leu Ser Lys Lys Pro Ser
 500 505 510
 Gly Pro Lys Asp Pro Lys His Pro Arg Asp Pro Lys Glu Pro Arg Lys
 515 520 525
 Ser Lys Ser Pro Arg Thr Ala Ser Pro Thr Arg Arg Pro Ser Pro Lys
 530 535 540
 Leu Pro Gln Leu Ser Lys Leu Pro Lys Ser Thr Ser Pro Arg Ser Pro
 545 550 555 560

Pro Pro Pro Thr Arg Pro Ser Ser Pro Glu Arg Pro Glu Gly Thr Lys
 565 570 575

Ile Ile Lys Thr Ser Lys Pro Pro Ser Pro Lys Pro Pro Phe Asp Pro
 580 585 590

Ser Phe Lys Glu Lys Phe Tyr Asp Asp Tyr Ser Lys Ala Ala Ser Arg
 595 600 605

Ser Lys Glu Thr Lys Thr Thr Val Val Leu Asp Glu Ser Phe Glu Ser
 610 615 620

Ile Leu Lys Glu Thr Leu Pro Glu Thr Pro Gly Thr Pro Phe Thr Thr
 625 630 635 640

Pro Arg Pro Val Pro Pro Lys Arg Pro Arg Thr Pro Glu Ser Pro Phe
 645 650 655

Glu Pro Pro Lys Asp Pro Asp Ser Pro Ser Thr Ser Pro Ser Glu Phe
 660 665 670

Phe Thr Pro Pro Glu Ser Lys Arg Thr Arg Phe His Glu Thr Pro Ala
 675 680 685

Asp Thr Pro Leu Pro Asp Val Thr Ala Glu Leu Phe Lys Glu Pro Asp
 690 695 700

Val Thr Ala Glu Thr Lys Ser Pro Asp Glu Ala Met Lys Arg Pro Arg
 705 710 715 720

Ser Pro Ser Glu Tyr Glu Asp Thr Ser Pro Gly Asp Tyr Pro Ser Leu
 725 730 735

Pro Met Lys Arg His Arg Leu Glu Arg Leu Arg Leu Thr Thr Thr Glu
 740 745 750

Met Glu Thr Asp Pro Gly Arg Met Ala Lys Asp Ala Ser Gly Lys Pro
 755 760 765

Val Lys Leu Lys Arg Ser Lys Ser Phe Asp Asp Leu Thr Thr Val Glu
 770 775 780

Leu Ala Pro Glu Pro Lys Ala Ser Arg Ile Val Val Asp Asp Glu Gly
 785 790 795 800

Thr Glu Ala Asp Asp Glu Glu Thr His Pro Pro Glu Glu Arg Gln Lys
 805 810 815

Thr Glu Val Arg Arg Arg Arg Pro Pro Lys Lys Pro Ser Lys Ser Pro
820 825 830

Arg Pro Ser Lys Pro Lys Lys Pro Lys Lys Pro Asp Ser Ala Tyr Ile
835 840 845

Pro Ser Ile Leu Ala Ile Leu Val Val Ser Leu Ile Val Gly Ile Leu
850 855 860

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<400> 109

Gln Leu Asn Glu Glu Met Glu Ala Lys Gln Asn Leu Glu Arg His Ile
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Ser Thr Leu Asn Ile Gln Leu Ser Asp Ser Lys Lys Lys Leu Gln Asp
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Phe Ala Ser Thr Val Glu Ala Leu Glu Glu Gly Lys Lys Arg Phe Gln
35 40 45

Lys Glu Ile Glu Asn Leu Thr Gln Gln Tyr Glu Glu Lys Ala Ala Ala
50 55 60

Tyr Asp Lys Leu Glu Lys Thr Lys Asn Arg Leu Gln Gln Glu Leu Asp
65 70 75 80

Asp Leu Val Val Asp Leu Asp Asn Gln Arg Gln Leu Val Ser Asn Leu
85 90 95

Glu Lys Lys Gln Arg Lys Phe Asp Gln Leu Leu Ala Glu Glu Lys Asn
100 105 110

Ile Ser Ser Lys Tyr Ala Asp Glu Arg Asp Arg Ala Glu Ala Glu Ala
115 120 125

Arg Glu Lys Glu Thr Lys Ala Leu Ser Leu Ala Arg Ala Leu Glu Glu
130 135 140

Ala Leu Glu Ala Lys Glu Glu Leu Glu Arg Thr Asn Lys Met Leu Lys
145 150 155 160

Ala Glu Met Glu Asp Leu Val Ser Ser Lys Asp Asp Val Gly Lys Asn
165 170 175

Val His Glu Leu Glu Lys Ser Lys Arg Ala Leu Glu Thr Gln Met Glu
 180 185 190
 Glu Met Lys Thr Gln Leu Glu Glu Leu Glu Asp Glu Leu Gln Ala Thr
 195 200 205
 Glu Asp Ala Lys Leu Arg Leu Glu Val Asn Met Gln Ala Leu Lys Gly
 210 215 220
 Gln Phe Glu Arg Asp Leu Gln Ala Arg Asp Glu Gln Asn Glu Glu Lys
 225 230 235 240
 Arg Arg Gln Leu Gln Arg Gln Leu His Glu Tyr Glu Thr Glu Leu Glu
 245 250 255
 Asp Glu Arg Lys Gln Arg Ala Leu Ala Ala Ala Lys Lys Lys Leu
 260 265 270
 Glu Gly Asp Leu Lys Asp Leu Glu Leu Gln Ala Asp Ser Ala Ile Lys
 275 280 285
 Gly Arg Glu Glu Ala Ile Lys His Val Arg Lys Leu Gln Ala Gln Met
 290 295 300
 Lys Asp Phe Gln Arg Glu Leu Glu Asp Ala Arg Ala Ser Arg Asp Glu
 305 310 315 320
 Ile Phe Ala Thr Ala Lys Glu Asn Glu Lys Lys Ala Lys Ser Leu Glu
 325 330 335
 Ala Asp Leu Met Gln Leu Gln Glu Asp Leu Ala Ala Ala Glu Arg Ala
 340 345 350
 Arg Lys Gln Ala Asp Leu Glu Lys Glu Glu Leu Ala Glu Glu Leu Ala
 355 360 365
 Ser Ser Leu Ser Gly Arg Asn Ala Leu Gln Asp Glu Lys Arg Arg Leu
 370 375 380
 Glu Ala Arg Ile Ala Gln Leu Glu Glu Glu Leu Glu Glu Glu Gln Gly
 385 390 395 400
 Asn Met Glu Ala Met Ser Asp Arg Val Arg Lys Ala Thr Gln Gln Ala
 405 410 415
 Glu Gln Leu Ser Asn Glu Leu Ala Thr Glu Arg Ser Thr Ala Gln Lys
 420 425 430

Asn Glu Ser Ala Arg Gln Gln Leu Glu Arg Gln Asn Lys Glu Leu Arg
435 440 445

Ser Lys Leu His Glu Met Glu Gly Ala Val Lys Ser Lys Phe Lys Ser
450 455 460

Thr Ile Ala Ala Leu Glu Ala Lys Ile Ala Gln Leu Glu Glu Gln Val
465 470 475 480

Glu Gln Glu Ala Arg Glu Lys Gln Ala Ala Thr Lys Ser Leu Lys Gln
485 490 495

Lys Asp Lys Lys Leu Lys Glu Ile Leu Leu Gln Val Glu Asp Glu Arg
500 505 510

Lys Met Ala Glu Gln Tyr Lys Glu Gln Ala Glu Lys Gly Asn Ala Arg
515 520 525

Val Lys Gln Leu Lys Arg Gln Leu Glu Glu Ala Glu Glu Glu Ser Gln
530 535 540

Arg Ile Asn Ala Asn Arg Arg Lys Leu Gln Arg Glu Leu Asp Glu Ala
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Thr Glu Ser Asn Glu Ala Met Gly Arg Glu Val Asn Ala Leu Lys Ser
565 570 575

Lys Leu Arg Gly Pro Pro Pro Gln Glu Thr Ser Gln
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<213> Homo sapiens

<400> 110

Met Ala Gly Arg Gly Lys Leu Thr Ala Val Ile Gly Asp Glu Asp Thr
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Val Thr Gly Phe Leu Leu Gly Gly Ile Gly Glu Leu Asn Lys Asn Arg
20 25 30

His Pro Asn Phe Leu Val Val Glu Lys Asp Thr Thr Ile Asn Glu Ile
35 40 45

Glu Asp Thr Phe Arg Gln Phe Leu Asn Arg Asp Asp Ile Gly Ile Ile
50 55 60

Leu Ile Asn Gln Tyr Ile Ala Glu Met Val Arg His Ala Leu Asp Ala
Page 284

65 70 75 80

His Gln Gln Ser Ile Pro Ala Val Leu Glu Ile Pro Ser Lys Glu His
 85 90 95

Pro Tyr Asp Ala Ala Lys Asp Ser Ile Leu Arg Arg Ala Arg Gly Met
 100 105 110

Phe Thr Ala Glu Asp Leu Arg
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 <211> 356
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<400> 111

Ala Ala Ala Ala Lys Pro Asn Asn Leu Ser Leu Val Val His Gly Pro
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Gly Asp Leu Arg Leu Glu Asn Tyr Pro Ile Pro Glu Pro Gly Pro Asn
 20 25 30

Glu Val Leu Leu Arg Met His Ser Val Gly Ile Cys Gly Ser Asp Val
 35 40 45

His Tyr Trp Glu Tyr Gly Arg Ile Gly Asn Phe Ile Val Lys Lys Pro
 50 55 60

Met Val Leu Gly His Glu Ala Ser Gly Thr Val Glu Lys Val Gly Ser
 65 70 75 80

Ser Val Lys His Leu Lys Pro Gly Asp Arg Val Ala Ile Glu Pro Gly
 85 90 95

Ala Pro Arg Glu Asn Asp Glu Phe Cys Lys Met Gly Arg Tyr Asn Leu
 100 105 110

Ser Pro Ser Ile Phe Phe Cys Ala Thr Pro Pro Asp Asp Gly Asn Leu
 115 120 125

Cys Arg Phe Tyr Lys His Asn Ala Ala Phe Cys Tyr Lys Leu Pro Asp
 130 135 140

Asn Val Thr Phe Glu Glu Gly Ala Leu Ile Glu Pro Leu Ser Val Gly
 145 150 155 160

Ile His Ala Cys Arg Arg Gly Gly Val Thr Leu Gly His Lys Val Leu
 165 170 175

Val Cys Gly Ala Gly Pro Ile Gly Met Val Thr Leu Leu Val Ala Lys
180 185 190

Ala Met Gly Ala Ala Gln Val Val Val Thr Asp Leu Ser Ala Thr Arg
195 200 205

Leu Ser Lys Ala Lys Glu Ile Gly Ala Asp Leu Val Leu Gln Ile Ser
210 215 220

Lys Glu Ser Pro Gln Glu Ile Ala Arg Lys Val Glu Gly Leu Leu Gly
225 230 235 240

Cys Lys Pro Glu Val Thr Ile Glu Cys Thr Gly Ala Glu Ala Ser Ile
245 250 255

Gln Ala Gly Ile Tyr Ala Thr Arg Ser Gly Gly Thr Leu Val Leu Val
260 265 270

Gly Leu Gly Ser Glu Met Thr Thr Val Pro Leu Leu His Ala Ala Ile
275 280 285

Arg Glu Val Asp Ile Lys Gly Val Phe Arg Tyr Cys Asn Thr Trp Pro
290 295 300

Val Ala Ile Ser Met Leu Ala Ser Lys Ser Val Asn Val Lys Pro Leu
305 310 315 320

Val Thr His Arg Phe Pro Leu Glu Lys Ala Leu Glu Ala Phe Glu Thr
325 330 335

Phe Lys Lys Gly Leu Gly Leu Lys Ile Met Leu Lys Cys Asp Pro Ser
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Asp Gln Asn Pro
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<212> PRT
<213> Homo sapiens

<400> 112

Met Ser Gln Ser Gln Asn Ala Ile Phe Thr Ser Pro Thr Gly Glu Glu
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Asn Leu Met Asn Ser Asn His Arg Asp Ser Glu Ser Ile Thr Asp Val
20 25 30

Cys Ser Asn Glu Asp Leu Pro Glu Val Glu Leu Val Ser Leu Leu Glu
35 40 45

Glu Gln Leu Pro Gln Tyr Arg Leu Lys Val Asp Thr Leu Phe Leu Tyr
50 55 60

Glu Asn Gln Asp Trp Thr Gln Ser Pro His Gln Arg Gln His Ala Ser
65 70 75 80

Asp Ala Leu Ser Pro Val Leu Ala Glu Glu Thr Phe Arg Tyr Met Ile
85 90 95

Leu Gly Thr Asp Arg Val Glu Gln Met Thr Lys Thr Tyr Asn Asp Ile
100 105 110

Asp Met Val Thr His Leu Leu Ala Glu Arg Asp Arg Asp Leu Glu Leu
115 120 125

Ala Ala Arg Ile Gly Gln Ala Leu Leu Lys Arg Asn His Val Leu Ser
130 135 140

Glu Gln Asn Glu Ser Leu Glu Glu Gln Leu Gly Gln Ala Phe Asp Gln
145 150 155 160

Val Asn Gln Leu Gln His Glu Leu Cys Lys Lys Asp Glu Leu Leu Arg
165 170 175

Ile Val Ser Ile Ala Ser Glu Glu Ser Glu Thr Asp Ser Ser Cys Ser
180 185 190

Thr Pro Leu Arg Phe Asn Glu Ser Phe Ser Leu Ser Gln Gly Leu Leu
195 200 205

Gln Leu Glu Met Leu Gln Glu Lys Leu Lys Glu Leu Glu Glu Glu Asn
210 215 220

Met Ala Leu Arg Ser Lys Ala Cys His Ile Lys Thr Glu Thr Val Thr
225 230 235 240

Tyr Glu Glu Lys Glu Gln Gln Leu Val Ser Asp Cys Val Lys Glu Leu
245 250 255

Arg Glu Thr Asn Ala Gln Met Ser Arg Met Thr Glu Glu Leu Ser Gly
260 265 270

Lys Ser Asp Glu Leu Ile Arg Tyr Gln Glu Glu Leu Ser Ser Leu Leu
275 280 285

Ser Gln Ile Val Asp Leu Gln His Lys Leu Lys Glu His Val Ile Glu
290 295 300

Lys Glu Glu Leu Lys Leu His Leu Gln Ala Ser Lys Asp Ala Gln Arg
305 310 315 320

Gln Leu Thr Met Glu Leu His Glu Leu Gln Asp Arg Asn Met Glu Cys
325 330 335

Leu Gly Met Leu His Glu Ser Gln Glu Glu Ile Lys Glu Leu Arg Ser
340 345 350

Arg Ser Gly Pro Thr Ala His Leu Tyr Phe Ser Gln Ser Tyr Gly Ala
355 360 365

Phe Thr Gly Glu Ser Leu Ala Ala Glu Ile Glu Gly Thr Met Arg Lys
370 375 380

Lys Leu Ser Leu Asp Glu Glu Ser Ser Leu Phe Lys Gln Lys Ala Gln
385 390 395 400

Gln Lys Arg Val Phe Asp Thr Val Arg Ile Ala Asn Asp Thr Arg Gly
405 410 415

Arg Ser Ile Ser Phe Pro Ala Leu Leu Pro Ile Pro Gly Ser Asn Arg
420 425 430

Ser Ser Val Ile Met Thr Ala Lys Pro Phe Glu Ser Gly Leu Gln Gln
435 440 445

Thr Glu Asp Lys Ser Leu Leu Asn Gln Gly Ser Ser Ser Glu Glu Val
450 455 460

Ala Gly Ser Ser Gln Lys Met Gly Gln Pro Gly Pro Ser Gly Asp Ser
465 470 475 480

Asp Leu Ala Thr Ala Leu His Arg Leu Ser Leu Arg Arg Gln Asn Tyr
485 490 495

Leu Ser Glu Lys Gln Phe Phe Ala Glu Glu Trp Gln Arg Lys Ile Gln
500 505 510

Val Leu Ala Asp Gln Lys Glu Gly Val Ser Gly Cys Val Thr Pro Thr
515 520 525

Glu Ser Leu Ala Ser Leu Cys Thr Thr Gln Ser Glu Ile Thr Asp Leu
530 535 540

Ser Ser Ala Ser Cys Leu Arg Gly Phe Met Pro Glu Lys Leu Gln Ile
 545 550 555 560
 Val Lys Pro Leu Glu Gly Ser Gln Thr Leu Tyr His Trp Gln Gln Leu
 565 570 575
 Ala Gln Pro Asn Leu Gly Thr Ile Leu Asp Pro Arg Pro Gly Val Ile
 580 585 590
 Thr Lys Gly Phe Thr Gln Leu Pro Gly Asp Ala Ile Tyr His Ile Ser
 595 600 605
 Asp Leu Glu Glu Asp Glu Glu Glu Gly Ile Thr Phe Gln Val Gln Gln
 610 615 620
 Pro Leu Glu Val Glu Glu Lys Leu Ser Thr Ser Lys Pro Val Thr Gly
 625 630 635 640
 Ile Phe Leu Pro Pro Ile Thr Ser Ala Gly Gly Pro Val Thr Val Ala
 645 650 655
 Thr Ala Asn Pro Gly Lys Cys Leu Ser Cys Thr Asn Ser Thr Phe Thr
 660 665 670
 Phe Thr Thr Cys Arg Ile Leu His Pro Ser Asp Ile Thr Gln Val Thr
 675 680 685
 Pro Ser Ser Gly Phe Pro Ser Leu Ser Cys Gly Ser Ser Gly Ser Ser
 690 695 700
 Ser Ser Asn Thr Ala Val Asn Ser Pro Ala Leu Ser Tyr Arg Leu Ser
 705 710 715 720
 Ile Gly Glu Ser Ile Thr Asn Arg Arg Asp Ser Thr Thr Thr Phe Ser
 725 730 735
 Ser Thr Met Ser Leu Ala Lys Leu Leu Gln Glu Arg Gly Ile Ser Ala
 740 745 750
 Lys Val Tyr His Ser Pro Ile Ser Glu Asn Pro Leu Gln Pro Leu Pro
 755 760 765
 Lys Ser Leu Ala Ile Pro Ser Thr Pro Pro Asn Ser Pro Ser His Ser
 770 775 780
 Pro Cys Pro Ser Pro Leu Pro Phe Glu Pro Arg Val His Leu Ser Glu
 785 790 795 800

Asn Phe Leu Ala Ser Arg Pro Ala Glu Thr Phe Leu Gln Glu Met Tyr
805 810 815

Gly Leu Arg Pro Ser Arg Asn Pro Pro Asp Val Gly Gln Leu Lys Met
820 825 830

Asn Leu Val Asp Arg Leu Lys Arg Leu Gly Ile Ala Arg Val Val Lys
835 840 845

Asn Pro Gly Ala Gln Glu Asn Gly Arg Cys Gln Glu Ala Glu Ile Gly
850 855 860

Pro Gln Lys Pro Asp Ser Ala Val Tyr Leu Asn Ser Gly Ser Ser Leu
865 870 875 880

Leu Gly Gly Leu Arg Arg Asn Gln Ser Leu Pro Val Ile Met Gly Ser
885 890 895

Phe Ala Ala Pro Val Cys Thr Ser Ser Pro Lys Met Gly Val Leu Lys
900 905 910

Glu Asp

<210> 113
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<213> Homo sapiens

<400> 113

Met Glu Ala Phe Leu Gly Ser Arg Ser Gly Leu Trp Ala Gly Gly Pro
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Ala Pro Gly Gln Phe Tyr Arg Ile Pro Ser Thr Pro Asp Ser Phe Met
20 25 30

Asp Pro Ala Ser Ala Leu Tyr Arg Gly Pro Ile Thr Arg Thr Gln Asn
35 40 45

Pro Met Val Thr Gly Thr Ser Val Leu Gly Val Lys Phe Glu Gly Gly
50 55 60

Val Val Ile Ala Ala Asp Met Leu Gly Ser Tyr Gly Ser Leu Ala Arg
65 70 75 80

Phe Arg Asn Ile Ser Arg Ile Met Arg Val Asn Asn Ser Thr Met Leu
85 90 95

Gly Ala Ser Gly Asp Tyr Ala Asp Phe Gln Tyr Leu Lys Gln Val Leu
100 105 110

Gly Gln Met Val Ile Asp Glu Glu Leu Leu Gly Asp Gly His Ser Tyr
115 120 125

Ser Pro Arg Ala Ile His Ser Trp Leu Thr Arg Ala Met Tyr Ser Arg
130 135 140

Arg Ser Lys Met Asn Pro Leu Trp Asn Thr Met Val Ile Gly Gly Tyr
145 150 155 160

Ala Asp Gly Glu Ser Phe Leu Gly Tyr Val Asp Met Leu Gly Val Ala
165 170 175

Tyr Glu Ala Pro Ser Leu Ala Thr Gly Tyr Gly Ala Tyr Leu Ala Gln
180 185 190

Pro Leu Leu Arg Glu Val Leu Glu Lys Gln Pro Val Leu Ser Gln Thr
195 200 205

Glu Ala Arg Asp Leu Val Glu Arg Cys Met Arg Val Leu Tyr Tyr Arg
210 215 220

Asp Ala Arg Ser Tyr Asn Arg Phe Gln Thr Ala Thr Val Thr Glu Lys
225 230 235 240

Gly Val Glu Ile Glu Gly Pro Leu Ser Thr Glu Thr Asn Trp Asp Ile
245 250 255

Ala His Met Ile Ser Gly Phe Glu
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<213> Homo sapiens

<400> 114

Met Phe Ser Phe Val Asp Leu Arg Leu Leu Leu Leu Ala Ala Thr
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Ala Leu Leu Thr His Gly Gln Glu Glu Gly Gln Val Glu Gly Gln Asp
20 25 30

Glu Asp Ile Pro Pro Ile Thr Cys Val Gln Asn Gly Leu Arg Tyr His
35 40 45

Asp Arg Asp Val Trp Lys Pro Glu Pro Cys Arg Ile Cys Val Cys Asp
Page 291

50

55

60

Asn Gly Lys Val Leu Cys Asp Asp Val Ile Cys Asp Glu Thr Lys Asn
65 70 75 80

Cys Pro Gly Ala Glu Val Pro Glu Gly Glu Cys Cys Pro Val Cys Pro
85 90 95

Asp Gly Ser Glu Ser Pro Thr Asp Gln Glu Thr Thr Gly Val Glu Gly
100 105 110

Pro Lys Gly Asp Thr Gly Pro Arg Gly Pro Arg Gly Pro Ala Gly Pro
115 120 125

Pro Gly Arg Asp Gly Ile Pro Gly Gln Pro Gly Leu Pro Gly Pro Pro
130 135 140

Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala
145 150 155 160

Pro Gln Leu Ser Tyr Gly Tyr Asp Glu Lys Ser Thr Gly Gly Ile Ser
165 170 175

Val Pro Gly Pro Met Gly Pro Ser Gly Pro Arg Gly Leu Pro Gly Pro
180 185 190

Pro Gly Ala Pro Gly Pro Gln Gly Phe Gln Gly Pro Pro Gly Glu Pro
195 200 205

Gly Glu Pro Gly Ala Ser Gly Pro Met Gly Pro Arg Gly Pro Pro Gly
210 215 220

Pro Pro Gly Lys Asn Gly Asp Asp Gly Glu Ala Gly Lys Pro Gly Arg
225 230 235 240

Pro Gly Glu Arg Gly Pro Pro Gly Pro Gln Gly Ala Arg Gly Leu Pro
245 250 255

Gly Thr Ala Gly Leu Pro Gly Met Lys Gly His Arg Gly Phe Ser Gly
260 265 270

Leu Asp Gly Ala Lys Gly Asp Ala Gly Pro Ala Gly Pro Lys Gly Glu
275 280 285

Pro Gly Ser Pro Gly Glu Asn Gly Ala Pro Gly Gln Met Gly Pro Arg
290 295 300

Gly Leu Pro Gly Glu Arg Gly Arg Pro Gly Ala Pro Gly Pro Ala Gly
Page 292

305		310		315		320
Ala Arg Gly Asn Asp	Gly Ala Thr Gly	Ala Ala Gly Pro Pro	Gly Pro			
	325		330			335
Thr Gly Pro Ala	Gly Pro Pro Gly	Phe Pro Gly Ala Val	Gly Ala Lys			
	340		345			350
Gly Glu Ala Gly	Pro Gln Gly	Pro Arg Gly Ser Glu	Gly Pro Gln Gly			
	355		360			365
Val Arg Gly Glu	Pro Gly Pro Pro Gly	Pro Ala Gly Ala Ala	Gly Pro			
	370		375			380
Ala Gly Asn Pro	Gly Ala Asp Gly	Gln Pro Gly Ala Lys	Gly Ala Asn			
	385		390			400
Gly Ala Pro Gly	Ile Ala Gly Ala Pro	Gly Phe Pro Gly Ala	Arg Gly			
	405		410			415
Pro Ser Gly Pro	Gln Gly Pro Gly	Gly Pro Pro Gly Pro	Lys Gly Asn			
	420		425			430
Ser Gly Glu Pro	Gly Ala Pro Gly	Ser Lys Gly Asp Thr	Gly Ala Lys			
	435		440			445
Gly Glu Pro Gly	Pro Val Gly Val	Gln Gly Pro Pro	Gly Pro Ala Gly			
	450		455			460
Glu Glu Gly Lys Arg	Gly Ala Arg Gly	Glu Pro Gly Pro Thr	Gly Leu			
	465		470			480
Pro Gly Pro Pro	Gly Glu Arg Gly	Gly Pro Gly Ser Arg	Gly Phe Pro			
	485		490			495
Gly Ala Asp Gly	Val Ala Gly Pro	Lys Gly Pro Ala Gly	Glu Arg Gly			
	500		505			510
Ser Pro Gly Pro	Ala Gly Pro Lys	Gly Ser Pro Gly	Glu Ala Gly Arg			
	515		520			525
Pro Gly Glu Ala	Gly Leu Pro Gly	Ala Lys Gly Leu	Thr Gly Ser Pro			
	530		535			540
Gly Ser Pro Gly	Pro Asp Gly Lys Thr	Gly Pro Pro Gly	Pro Ala Gly			
	545		550			560
Gln Asp Gly Arg	Pro Gly Pro Pro	Gly Pro Pro Gly	Ala Arg Gly Gln			

565

570

575

Ala Gly Val Met Gly Phe Pro Gly Pro Lys Gly Ala Ala Gly Glu Pro
580 585 590

Gly Lys Ala Gly Glu Arg Gly Val Pro Gly Pro Pro Gly Ala Val Gly
595 600 605

Pro Ala Gly Lys Asp Gly Glu Ala Gly Ala Gln Gly Pro Pro Gly Pro
610 615 620

Ala Gly Pro Ala Gly Glu Arg Gly Glu Gln Gly Pro Ala Gly Ser Pro
625 630 635 640

Gly Phe Gln Gly Leu Pro Gly Pro Ala Gly Pro Pro Gly Glu Ala Gly
645 650 655

Lys Pro Gly Glu Gln Gly Val Pro Gly Asp Leu Gly Ala Pro Gly Pro
660 665 670

Ser Gly Ala Arg Gly Glu Arg Gly Phe Pro Gly Glu Arg Gly Val Gln
675 680 685

Gly Pro Pro Gly Pro Ala Gly Pro Arg Gly Ala Asn Gly Ala Pro Gly
690 695 700

Asn Asp Gly Ala Lys Gly Asp Ala Gly Ala Pro Gly Ala Pro Gly Ser
705 710 715 720

Gln Gly Ala Pro Gly Leu Gln Gly Met Pro Gly Glu Arg Gly Ala Ala
725 730 735

Gly Leu Pro Gly Pro Lys Gly Asp Arg Gly Asp Ala Gly Pro Lys Gly
740 745 750

Ala Asp Gly Ser Pro Gly Lys Asp Gly Val Arg Gly Leu Thr Gly Pro
755 760 765

Ile Gly Pro Pro Gly Pro Ala Gly Ala Pro Gly Asp Lys Gly Glu Ser
770 775 780

Gly Pro Ser Gly Pro Ala Gly Pro Thr Gly Ala Arg Gly Ala Pro Gly
785 790 795 800

Asp Arg Gly Glu Pro Gly Pro Pro Gly Pro Ala Gly Phe Ala Gly Pro
805 810 815

Pro Gly Ala Asp Gly Gln Pro Gly Ala Lys Gly Glu Pro Gly Asp Ala
Page 294

820	825	830
Gly Ala Lys Gly Asp Ala Gly Pro Pro Gly Pro Ala Gly Pro Ala Gly		
835	840	845
Pro Pro Gly Pro Ile Gly Asn Val Gly Ala Pro Gly Ala Lys Gly Ala		
850	855	860
Arg Gly Ser Ala Gly Pro Pro Gly Ala Thr Gly Phe Pro Gly Ala Ala		
865	870	875
Gly Arg Val Gly Pro Pro Gly Pro Ser Gly Asn Ala Gly Pro Pro Gly		
885	890	895
Pro Pro Gly Pro Ala Gly Lys Glu Gly Gly Lys Gly Pro Arg Gly Glu		
900	905	910
Thr Gly Pro Ala Gly Arg Pro Gly Glu Val Gly Pro Pro Gly Pro Pro		
915	920	925
Gly Pro Ala Gly Glu Lys Gly Ser Pro Gly Ala Asp Gly Pro Ala Gly		
930	935	940
Ala Pro Gly Thr Pro Gly Pro Gln Gly Ile Ala Gly Gln Arg Gly Val		
945	950	955
Val Gly Leu Pro Gly Gln Arg Gly Glu Arg Gly Phe Pro Gly Leu Pro		
965	970	975
Gly Pro Ser Gly Glu Pro Gly Lys Gln Gly Pro Ser Gly Ala Ser Gly		
980	985	990
Glu Arg Gly Pro Pro Gly Pro Met Gly Pro Pro Gly Leu Ala Gly Pro		
995	1000	1005
Pro Gly Glu Ser Gly Arg Glu Gly Ala Pro Gly Ala Glu Gly Ser		
1010	1015	1020
Pro Gly Arg Asp Gly Ser Pro Gly Ala Lys Gly Asp Arg Gly Glu		
1025	1030	1035
Thr Gly Pro Ala Gly Pro Pro Gly Ala Pro Gly Ala Pro Gly Ala		
1040	1045	1050
Pro Gly Pro Val Gly Pro Ala Gly Lys Ser Gly Asp Arg Gly Glu		
1055	1060	1065
Thr Gly Pro Ala Gly Pro Ala Gly Pro Val Gly Pro Ala Gly Ala		

1070	1075	1080
Arg Gly 1085	Pro Ala Gly Pro Gln 1090	Gly Pro Arg Gly Asp 1095
Lys Gly Glu		
Thr Gly 1100	Glu Gln Gly Asp Arg 1105	Gly Ile Lys Gly His 1110
Arg Gly Phe		
Ser Gly 1115	Leu Gln Gly Pro Pro 1120	Gly Pro Pro Gly Ser 1125
Pro Gly Glu		
Gln Gly 1130	Pro Ser Gly Ala Ser 1135	Gly Pro Ala Gly Pro 1140
Arg Gly Pro		
Pro Gly 1145	Ser Ala Gly Ala Pro 1150	Gly Lys Asp Gly Leu 1155
Asn Gly Leu		
Pro Gly 1160	Pro Ile Gly Pro Pro 1165	Gly Pro Arg Gly Arg 1170
Thr Gly Asp		
Ala Gly 1175	Pro Val Gly Pro Pro 1180	Gly Pro Pro Gly Pro 1185
Pro Gly Pro		
Pro Gly 1190	Pro Pro Ser Ala Gly 1195	Phe Asp Phe Ser Phe 1200
Leu Pro Gln		
Pro Pro 1205	Gln Glu Lys Ala His 1210	Asp Gly Gly Arg Tyr 1215
Tyr Arg Ala		
Asp Asp 1220	Ala Asn Val Val Arg 1225	Asp Arg Asp Leu Glu 1230
Val Asp Thr		
Thr Leu 1235	Lys Ser Leu Ser Gln 1240	Gln Ile Glu Asn Ile 1245
Arg Ser Pro		
Glu Gly 1250	Ser Arg Lys Asn Pro 1255	Ala Arg Thr Cys Arg 1260
Asp Leu Lys		
Met Cys 1265	His Ser Asp Trp Lys 1270	Ser Gly Glu Tyr Trp 1275
Ile Asp Pro		
Asn Gln 1280	Gly Cys Asn Leu Asp 1285	Ala Ile Lys Val Phe 1290
Cys Asn Met		
Glu Thr 1295	Gly Glu Thr Cys Val 1300	Tyr Pro Thr Gln Pro 1305
Ser Val Ala		
Gln Lys	Asn Trp Tyr Ile Ser	Lys Asn Pro Lys Asp
Lys Arg His		

1310

1315

1320

Val Trp Phe Gly Glu Ser Met Thr Asp Gly Phe Gln Phe Glu Tyr
 1325 1330 1335

Gly Gly Gln Gly Ser Asp Pro Ala Asp Val Ala Ile Gln Leu Thr
 1340 1345 1350

Phe Leu Arg Leu Met Ser Thr Glu Ala Ser Gln Asn Ile Thr Tyr
 1355 1360 1365

His Cys Lys Asn Ser Val Ala Tyr Met Asp Gln Gln Thr Gly Asn
 1370 1375 1380

Leu Lys Lys Ala Leu Leu Leu Lys Gly Ser Asn Glu Ile Glu Ile
 1385 1390 1395

Arg Ala Glu Gly Asn Ser Arg Phe Thr Tyr Ser Val Thr Val Asp
 1400 1405 1410

Gly Cys Thr Ser His Thr Gly Ala Trp Gly Lys Thr Val Ile Glu
 1415 1420 1425

Tyr Lys Thr Thr Lys Thr Ser Arg Leu Pro Ile Ile Asp Val Ala
 1430 1435 1440

Pro Leu Asp Val Gly Ala Pro Asp Gln Glu Phe Gly Phe Asp Val
 1445 1450 1455

Gly Pro Val Cys Phe Leu
 1460

<210> 115
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 115

Met Ile Leu Gln Arg Leu Phe Arg Phe Ser Ser Val Ile Arg Ser Ala
 1 5 10 15

Val Ser Val His Leu Arg Arg Asn Ile Gly Val Thr Ala Val Ala Phe
 20 25 30

Asn Lys Glu Leu Asp Pro Ile Gln Lys Leu Phe Val Asp Lys Ile Arg
 35 40 45

Glu Tyr Lys Ser Lys Arg Gln Thr Ser Gly Gly Pro Val Asp Ala Ser
 50 55 60

Ser Glu Tyr Gln Gln Glu Leu Glu Arg Glu Leu Phe Lys Leu Lys Gln
65 70 75 80

Met Phe Gly Asn Ala Asp Met Asn Thr Phe Pro Thr Phe Lys Phe Glu
85 90 95

Asp Pro Lys Phe Glu Val Ile Glu Lys Pro Gln Ala
100 105

<210> 116
<211> 1210
<212> PRT
<213> Homo sapiens

<400> 116

Met Ala Ala Ala Ala Gly Ala Ala Ala Ala Ala Ala Ala Glu Gly Glu
1 5 10 15

Ala Pro Ala Glu Met Gly Ala Leu Leu Leu Glu Lys Glu Thr Arg Gly
20 25 30

Ala Thr Glu Arg Val His Gly Ser Leu Gly Asp Thr Pro Arg Ser Glu
35 40 45

Glu Thr Leu Pro Lys Ala Asn Pro Asp Ser Leu Glu Pro Ala Gly Pro
50 55 60

Ser Ser Pro Ala Ser Val Thr Val Thr Val Gly Asp Glu Gly Ala Asp
65 70 75 80

Thr Pro Val Gly Ala Thr Pro Leu Ile Gly Asp Glu Ser Glu Asn Leu
85 90 95

Glu Gly Asp Gly Asp Leu Arg Gly Gly Arg Ile Leu Leu Gly His Ala
100 105 110

Thr Lys Ser Phe Pro Ser Ser Pro Ser Lys Gly Gly Ser Cys Pro Ser
115 120 125

Arg Ala Lys Met Ser Met Thr Gly Ala Gly Lys Ser Pro Pro Ser Val
130 135 140

Gln Ser Leu Ala Met Arg Leu Leu Ser Met Pro Gly Ala Gln Gly Ala
145 150 155 160

Ala Ala Ala Gly Ser Glu Pro Pro Pro Ala Thr Thr Ser Pro Glu Gly
165 170 175

Gln Pro Lys Val His Arg Ala Arg Lys Thr Met Ser Lys Pro Gly Asn
 180 185 190
 Gly Gln Pro Pro Val Pro Glu Lys Arg Pro Pro Glu Ile Gln His Phe
 195 200 205
 Arg Met Ser Asp Asp Val His Ser Leu Gly Lys Val Thr Ser Asp Leu
 210 215 220
 Ala Lys Arg Arg Lys Leu Asn Ser Gly Gly Gly Leu Ser Glu Glu Leu
 225 230 235 240
 Gly Ser Ala Arg Arg Ser Gly Glu Val Thr Leu Thr Lys Gly Asp Pro
 245 250 255
 Gly Ser Leu Glu Glu Trp Glu Thr Val Val Gly Asp Asp Phe Ser Leu
 260 265 270
 Tyr Tyr Asp Ser Tyr Ser Val Asp Glu Arg Val Asp Ser Asp Ser Lys
 275 280 285
 Ser Glu Val Glu Ala Leu Thr Glu Gln Leu Ser Glu Glu Glu Glu
 290 295 300
 Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu
 305 310 315 320
 Glu Glu Glu Asp Glu Glu Ser Gly Asn Gln Ser Asp Arg Ser Gly Ser
 325 330 335
 Ser Gly Arg Arg Lys Ala Lys Lys Lys Trp Arg Lys Asp Ser Pro Trp
 340 345 350
 Val Lys Pro Ser Arg Lys Arg Arg Lys Arg Glu Pro Pro Arg Ala Lys
 355 360 365
 Glu Pro Arg Gly Val Asn Gly Val Gly Ser Ser Gly Pro Ser Glu Tyr
 370 375 380
 Met Glu Val Pro Leu Gly Ser Leu Glu Leu Pro Ser Glu Gly Thr Leu
 385 390 395 400
 Ser Pro Asn His Ala Gly Val Ser Asn Asp Thr Ser Ser Leu Glu Thr
 405 410 415
 Glu Arg Gly Phe Glu Glu Leu Pro Leu Cys Ser Cys Arg Met Glu Ala
 420 425 430

Pro Lys Ile Asp Arg Ile Ser Glu Arg Ala Gly His Lys Cys Met Ala
 435 440 445
 Thr Glu Ser Val Asp Gly Glu Leu Ser Gly Cys Asn Ala Ala Ile Leu
 450 455 460
 Lys Arg Glu Thr Met Arg Pro Ser Ser Arg Val Ala Leu Met Val Leu
 465 470 475 480
 Cys Glu Thr His Arg Ala Arg Met Val Lys His His Cys Cys Pro Gly
 485 490 495
 Cys Gly Tyr Phe Cys Thr Ala Gly Thr Phe Leu Glu Cys His Pro Asp
 500 505 510
 Phe Arg Val Ala His Arg Phe His Lys Ala Cys Val Ser Gln Leu Asn
 515 520 525
 Gly Met Val Phe Cys Pro His Cys Gly Glu Asp Ala Ser Glu Ala Gln
 530 535 540
 Glu Val Thr Ile Pro Arg Gly Asp Gly Val Thr Pro Pro Ala Gly Thr
 545 550 555 560
 Ala Ala Pro Ala Pro Pro Pro Leu Ser Gln Asp Val Pro Gly Arg Ala
 565 570 575
 Asp Thr Ser Gln Pro Ser Ala Arg Met Arg Gly His Gly Glu Pro Arg
 580 585 590
 Arg Pro Pro Cys Asp Pro Leu Ala Asp Thr Ile Asp Ser Ser Gly Pro
 595 600 605
 Ser Leu Thr Leu Pro Asn Gly Gly Cys Leu Ser Ala Val Gly Leu Pro
 610 615 620
 Leu Gly Pro Gly Arg Glu Ala Leu Glu Lys Ala Leu Val Ile Gln Glu
 625 630 635 640
 Ser Glu Arg Arg Lys Lys Leu Arg Phe His Pro Arg Gln Leu Tyr Leu
 645 650 655
 Ser Val Lys Gln Gly Glu Leu Gln Lys Val Ile Leu Met Leu Leu Asp
 660 665 670
 Asn Leu Asp Pro Asn Phe Gln Ser Asp Gln Gln Ser Lys Arg Thr Pro
 675 680 685

Leu His Ala Ala Ala Gln Lys Gly Ser Val Glu Ile Cys His Val Leu
 690 695 700
 Leu Gln Ala Gly Ala Asn Ile Asn Ala Val Asp Lys Gln Gln Arg Thr
 705 710 715 720
 Pro Leu Met Glu Ala Val Val Asn Asn His Leu Glu Val Ala Arg Tyr
 725 730 735
 Met Val Gln Arg Gly Gly Cys Val Tyr Ser Lys Glu Glu Asp Gly Ser
 740 745 750
 Thr Cys Leu His His Ala Ala Lys Ile Gly Asn Leu Glu Met Val Ser
 755 760 765
 Leu Leu Leu Ser Thr Gly Gln Val Asp Val Asn Ala Gln Asp Ser Gly
 770 775 780
 Gly Trp Thr Pro Ile Ile Trp Ala Ala Glu His Lys His Ile Glu Val
 785 790 795 800
 Ile Arg Met Leu Leu Thr Arg Gly Ala Asp Val Thr Leu Thr Asp Asn
 805 810 815
 Glu Glu Asn Ile Cys Leu His Trp Ala Ser Phe Thr Gly Ser Ala Ala
 820 825 830
 Ile Ala Glu Val Leu Leu Asn Ala Arg Cys Asp Leu His Ala Val Asn
 835 840 845
 Tyr His Gly Asp Thr Pro Leu His Ile Ala Ala Arg Glu Ser Tyr His
 850 855 860
 Asp Cys Val Leu Leu Phe Leu Ser Arg Gly Ala Asn Pro Glu Leu Arg
 865 870 875 880
 Asn Lys Glu Gly Asp Thr Ala Trp Asp Leu Thr Pro Glu Arg Ser Asp
 885 890 895
 Val Trp Phe Ala Leu Gln Leu Asn Arg Lys Leu Arg Leu Gly Val Gly
 900 905 910
 Asn Arg Ala Ile Arg Thr Glu Lys Ile Ile Cys Arg Asp Val Ala Arg
 915 920 925
 Gly Tyr Glu Asn Val Pro Ile Pro Cys Val Asn Gly Val Asp Gly Glu
 930 935 940

Pro Cys Pro Glu Asp Tyr Lys Tyr Ile Ser Glu Asn Cys Glu Thr Ser
945 950 955 960

Thr Met Asn Ile Asp Arg Asn Ile Thr His Leu Gln His Cys Thr Cys
965 970 975

Val Asp Asp Cys Ser Ser Ser Asn Cys Leu Cys Gly Gln Leu Ser Ile
980 985 990

Arg Cys Trp Tyr Asp Lys Asp Gly Arg Leu Leu Gln Glu Phe Asn Lys
995 1000 1005

Ile Glu Pro Pro Leu Ile Phe Glu Cys Asn Gln Ala Cys Ser Cys
1010 1015 1020

Trp Arg Asn Cys Lys Asn Arg Val Val Gln Ser Gly Ile Lys Val
1025 1030 1035

Arg Leu Gln Leu Tyr Arg Thr Ala Lys Met Gly Trp Gly Val Arg
1040 1045 1050

Ala Leu Gln Thr Ile Pro Gln Gly Thr Phe Ile Cys Glu Tyr Val
1055 1060 1065

Gly Glu Leu Ile Ser Asp Ala Glu Ala Asp Val Arg Glu Asp Asp
1070 1075 1080

Ser Tyr Leu Phe Asp Leu Asp Asn Lys Asp Gly Glu Val Tyr Cys
1085 1090 1095

Ile Asp Ala Arg Tyr Tyr Gly Asn Ile Ser Arg Phe Ile Asn His
1100 1105 1110

Leu Cys Asp Pro Asn Ile Ile Pro Val Arg Val Phe Met Leu His
1115 1120 1125

Gln Asp Leu Arg Phe Pro Arg Ile Ala Phe Phe Ser Ser Arg Asp
1130 1135 1140

Ile Arg Thr Gly Glu Glu Leu Gly Phe Asp Tyr Gly Asp Arg Phe
1145 1150 1155

Trp Asp Ile Lys Ser Lys Tyr Phe Thr Cys Gln Cys Gly Ser Glu
1160 1165 1170

Lys Cys Lys His Ser Ala Glu Ala Ile Ala Leu Glu Gln Ser Arg
1175 1180 1185

Leu Ala Arg Leu Asp Pro His Pro Glu Leu Leu Pro Glu Leu Gly
1190 1195 1200

Ser Leu Pro Pro Val Asn Thr
1205 1210

<210> 117
<211> 937
<212> PRT
<213> Homo sapiens

<400> 117

Met Glu Lys Met Leu Ala Gly Cys Phe Leu Leu Ile Leu Gly Gln Ile
1 5 10 15

Val Leu Leu Pro Ala Glu Ala Arg Glu Arg Ser Arg Gly Arg Ser Ile
20 25 30

Ser Arg Gly Arg His Ala Arg Thr His Pro Gln Thr Ala Leu Leu Glu
35 40 45

Ser Ser Cys Glu Asn Lys Arg Ala Asp Leu Val Phe Ile Ile Asp Ser
50 55 60

Ser Arg Ser Val Asn Thr His Asp Tyr Ala Lys Val Lys Glu Phe Ile
65 70 75 80

Val Asp Ile Leu Gln Phe Leu Asp Ile Gly Pro Asp Val Thr Arg Val
85 90 95

Gly Leu Leu Gln Tyr Gly Ser Thr Val Lys Asn Glu Phe Ser Leu Lys
100 105 110

Thr Phe Lys Arg Lys Ser Glu Val Glu Arg Ala Val Lys Arg Met Arg
115 120 125

His Leu Ser Thr Gly Thr Met Thr Gly Leu Ala Ile Gln Tyr Ala Leu
130 135 140

Asn Ile Ala Phe Ser Glu Ala Glu Gly Ala Arg Pro Leu Arg Glu Asn
145 150 155 160

Val Pro Arg Val Ile Met Ile Val Thr Asp Gly Arg Pro Gln Asp Ser
165 170 175

Val Ala Glu Val Ala Ala Lys Ala Arg Asp Thr Gly Ile Leu Ile Phe
180 185 190

Ala Ile Gly Val Gly Gln Val Asp Phe Asn Thr Leu Lys Ser Ile Gly
 195 200 205

Ser Glu Pro His Glu Asp His Val Phe Leu Val Ala Asn Phe Ser Gln
 210 215 220

Ile Glu Thr Leu Thr Ser Val Phe Gln Lys Lys Leu Cys Thr Ala His
 225 230 235 240

Met Cys Ser Thr Leu Glu His Asn Cys Ala His Phe Cys Ile Asn Ile
 245 250 255

Pro Gly Ser Tyr Val Cys Arg Cys Lys Gln Gly Tyr Ile Leu Asn Ser
 260 265 270

Asp Gln Thr Thr Cys Arg Ile Gln Asp Leu Cys Ala Met Glu Asp His
 275 280 285

Asn Cys Glu Gln Leu Cys Val Asn Val Pro Gly Ser Phe Val Cys Gln
 290 295 300

Cys Tyr Ser Gly Tyr Ala Leu Ala Glu Asp Gly Lys Arg Cys Val Ala
 305 310 315 320

Val Asp Tyr Cys Ala Ser Glu Asn His Gly Cys Glu His Glu Cys Val
 325 330 335

Asn Ala Asp Gly Ser Tyr Leu Cys Gln Cys His Glu Gly Phe Ala Leu
 340 345 350

Asn Pro Asp Glu Lys Thr Cys Thr Lys Ile Asp Tyr Cys Ala Ser Ser
 355 360 365

Asn His Gly Cys Gln His Glu Cys Val Asn Thr Asp Asp Ser Tyr Ser
 370 375 380

Cys His Cys Leu Lys Gly Phe Thr Leu Asn Pro Asp Lys Lys Thr Cys
 385 390 395 400

Arg Arg Ile Asn Tyr Cys Ala Leu Asn Lys Pro Gly Cys Glu His Glu
 405 410 415

Cys Val Asn Met Glu Glu Ser Tyr Tyr Cys Arg Cys His Arg Gly Tyr
 420 425 430

Thr Leu Asp Pro Asn Gly Lys Thr Cys Ser Arg Val Asp His Cys Ala
 435 440 445

Gln Gln Asp His Gly Cys Glu Gln Leu Cys Leu Asn Thr Glu Asp Ser
 450 455 460
 Phe Val Cys Gln Cys Ser Glu Gly Phe Leu Ile Asn Glu Asp Leu Lys
 465 470 475 480
 Thr Cys Ser Arg Val Asp Tyr Cys Leu Leu Ser Asp His Gly Cys Glu
 485 490 495
 Tyr Ser Cys Val Asn Met Asp Arg Ser Phe Ala Cys Gln Cys Pro Glu
 500 505 510
 Gly His Val Leu Arg Ser Asp Gly Lys Thr Cys Ala Lys Leu Asp Ser
 515 520 525
 Cys Ala Leu Gly Asp His Gly Cys Glu His Ser Cys Val Ser Ser Glu
 530 535 540
 Asp Ser Phe Val Cys Gln Cys Phe Glu Gly Tyr Ile Leu Arg Glu Asp
 545 550 555 560
 Gly Lys Thr Cys Arg Arg Lys Asp Val Cys Gln Ala Ile Asp His Gly
 565 570 575
 Cys Glu His Ile Cys Val Asn Ser Asp Asp Ser Tyr Thr Cys Glu Cys
 580 585 590
 Leu Glu Gly Phe Arg Leu Ala Glu Asp Gly Lys Arg Cys Arg Arg Lys
 595 600 605
 Asp Val Cys Lys Ser Thr His His Gly Cys Glu His Ile Cys Val Asn
 610 615 620
 Asn Gly Asn Ser Tyr Ile Cys Lys Cys Ser Glu Gly Phe Val Leu Ala
 625 630 635 640
 Glu Asp Gly Arg Arg Cys Lys Lys Cys Thr Glu Gly Pro Ile Asp Leu
 645 650 655
 Val Phe Val Ile Asp Gly Ser Lys Ser Leu Gly Glu Glu Asn Phe Glu
 660 665 670
 Val Val Lys Gln Phe Val Thr Gly Ile Ile Asp Ser Leu Thr Ile Ser
 675 680 685
 Pro Lys Ala Ala Arg Val Gly Leu Leu Gln Tyr Ser Thr Gln Val His
 690 695 700

Thr Glu Phe Thr Leu Arg Asn Phe Asn Ser Ala Lys Asp Met Lys Lys
705 710 715 720

Ala Val Ala His Met Lys Tyr Met Gly Lys Gly Ser Met Thr Gly Leu
725 730 735

Ala Leu Lys His Met Phe Glu Arg Ser Phe Thr Gln Gly Glu Gly Ala
740 745 750

Arg Pro Leu Ser Thr Arg Val Pro Arg Ala Ala Ile Val Phe Thr Asp
755 760 765

Gly Arg Ala Gln Asp Asp Val Ser Glu Trp Ala Ser Lys Ala Lys Ala
770 775 780

Asn Gly Ile Thr Met Tyr Ala Val Gly Val Gly Lys Ala Ile Glu Glu
785 790 795 800

Glu Leu Gln Glu Ile Ala Ser Glu Pro Thr Asn Lys His Leu Phe Tyr
805 810 815

Ala Glu Asp Phe Ser Thr Met Asp Glu Ile Ser Glu Lys Leu Lys Lys
820 825 830

Gly Ile Cys Glu Ala Leu Glu Asp Ser Asp Gly Arg Gln Asp Ser Pro
835 840 845

Ala Gly Glu Leu Pro Lys Thr Val Gln Gln Pro Thr Val Gln His Arg
850 855 860

Tyr Leu Phe Glu Glu Asp Asn Leu Leu Arg Ser Thr Gln Lys Leu Ser
865 870 875 880

His Ser Thr Lys Pro Ser Gly Ser Pro Leu Glu Glu Lys His Asp Gln
885 890 895

Cys Lys Cys Glu Asn Leu Ile Met Phe Gln Asn Leu Ala Asn Glu Glu
900 905 910

Val Arg Lys Leu Thr Gln Arg Leu Glu Glu Met Thr Gln Arg Met Glu
915 920 925

Ala Leu Glu Asn Arg Leu Arg Tyr Arg
930 935

<210> 118
<211> 182
<212> PRT
<213> Homo sapiens

<400> 118

Met Pro Arg Val Val Pro Asp Gln Arg Ser Lys Phe Glu Asn Glu Glu
1 5 10 15

Phe Phe Arg Lys Leu Ser Arg Glu Cys Glu Ile Lys Tyr Thr Gly Phe
20 25 30

Arg Asp Arg Pro His Glu Glu Arg Gln Ala Arg Phe Gln Asn Ala Cys
35 40 45

Arg Asp Gly Arg Ser Glu Ile Ala Phe Val Ala Thr Gly Thr Asn Leu
50 55 60

Ser Leu Gln Phe Phe Pro Ala Ser Trp Gln Gly Glu Gln Arg Gln Thr
65 70 75 80

Pro Ser Arg Glu Tyr Val Asp Leu Glu Arg Glu Ala Gly Lys Val Tyr
85 90 95

Leu Lys Ala Pro Met Ile Leu Asn Gly Val Cys Val Ile Trp Lys Gly
100 105 110

Trp Ile Asp Leu Gln Arg Leu Asp Gly Met Gly Cys Leu Glu Phe Asp
115 120 125

Glu Glu Arg Ala Gln Gln Glu Asp Ala Leu Ala Gln Gln Ala Phe Glu
130 135 140

Glu Ala Arg Arg Arg Thr Arg Glu Phe Glu Asp Arg Asp Arg Ser His
145 150 155 160

Arg Glu Glu Met Glu Val Arg Val Ser Gln Leu Leu Ala Val Thr Gly
165 170 175

Lys Lys Thr Thr Arg Pro
180

<210> 119

<211> 1366

<212> PRT

<213> Homo sapiens

<400> 119

Met Leu Ser Phe Val Asp Thr Arg Thr Leu Leu Leu Ala Val Thr
1 5 10 15

Leu Cys Leu Ala Thr Cys Gln Ser Leu Gln Glu Glu Thr Val Arg Lys
20 25 30

Gly Pro Ala Gly Asp Arg Gly Pro Arg Gly Glu Arg Gly Pro Pro Gly
 35 40 45

Pro Pro Gly Arg Asp Gly Glu Asp Gly Pro Thr Gly Pro Pro Gly Pro
 50 55 60

Pro Gly Pro Pro Gly Pro Pro Gly Leu Gly Gly Asn Phe Ala Ala Gln
 65 70 75 80

Tyr Asp Gly Lys Gly Val Gly Leu Gly Pro Gly Pro Met Gly Leu Met
 85 90 95

Gly Pro Arg Gly Pro Pro Gly Ala Ala Gly Ala Pro Gly Pro Gln Gly
 100 105 110

Phe Gln Gly Pro Ala Gly Glu Pro Gly Glu Pro Gly Gln Thr Gly Pro
 115 120 125

Ala Gly Ala Arg Gly Pro Ala Gly Pro Pro Gly Lys Ala Gly Glu Asp
 130 135 140

Gly His Pro Gly Lys Pro Gly Arg Pro Gly Glu Arg Gly Val Val Gly
 145 150 155 160

Pro Gln Gly Ala Arg Gly Phe Pro Gly Thr Pro Gly Leu Pro Gly Phe
 165 170 175

Lys Gly Ile Arg Gly His Asn Gly Leu Asp Gly Leu Lys Gly Gln Pro
 180 185 190

Gly Ala Pro Gly Val Lys Gly Glu Pro Gly Ala Pro Gly Glu Asn Gly
 195 200 205

Thr Pro Gly Gln Thr Gly Ala Arg Gly Leu Pro Gly Glu Arg Gly Arg
 210 215 220

Val Gly Ala Pro Gly Pro Ala Gly Ala Arg Gly Ser Asp Gly Ser Val
 225 230 235 240

Gly Pro Val Gly Pro Ala Gly Pro Asn Gly Ser Ala Gly Pro Pro Gly
 245 250 255

Phe Pro Gly Ala Pro Gly Pro Lys Gly Glu Ile Gly Ala Val Gly Asn
 260 265 270

Ala Gly Pro Thr Gly Pro Ala Gly Pro Arg Gly Glu Val Gly Leu Pro
 275 280 285

Gly Leu Ser Gly Pro Val Gly Pro Pro Gly Asn Pro Gly Ala Asn Gly
 290 295 300

Leu Thr Gly Ala Lys Gly Ala Ala Gly Leu Pro Gly Val Ala Gly Ala
 305 310 315 320

Pro Gly Leu Pro Gly Pro Arg Gly Ile Pro Gly Pro Val Gly Ala Ala
 325 330 335

Gly Ala Thr Gly Ala Arg Gly Leu Val Gly Glu Pro Gly Pro Ala Gly
 340 345 350

Ser Lys Gly Glu Ser Gly Asn Lys Gly Glu Pro Gly Ser Ala Gly Pro
 355 360 365

Gln Gly Pro Pro Gly Pro Ser Gly Glu Glu Gly Lys Arg Gly Pro Asn
 370 375 380

Gly Glu Ala Gly Ser Ala Gly Pro Pro Gly Pro Pro Gly Leu Arg Gly
 385 390 395 400

Ser Pro Gly Ser Arg Gly Leu Pro Gly Ala Asp Gly Arg Ala Gly Val
 405 410 415

Met Gly Pro Pro Gly Ser Arg Gly Ala Ser Gly Pro Ala Gly Val Arg
 420 425 430

Gly Pro Asn Gly Asp Ala Gly Arg Pro Gly Glu Pro Gly Leu Met Gly
 435 440 445

Pro Arg Gly Leu Pro Gly Ser Pro Gly Asn Ile Gly Pro Ala Gly Lys
 450 455 460

Glu Gly Pro Val Gly Leu Pro Gly Ile Asp Gly Arg Pro Gly Pro Ile
 465 470 475 480

Gly Pro Ala Gly Ala Arg Gly Glu Pro Gly Asn Ile Gly Phe Pro Gly
 485 490 495

Pro Lys Gly Pro Thr Gly Asp Pro Gly Lys Asn Gly Asp Lys Gly His
 500 505 510

Ala Gly Leu Ala Gly Ala Arg Gly Ala Pro Gly Pro Asp Gly Asn Asn
 515 520 525

Gly Ala Gln Gly Pro Pro Gly Pro Gln Gly Val Gln Gly Gly Lys Gly
 530 535 540

Glu Gln Gly Pro Asp Gly Pro Pro Gly Phe Gln Gly Leu Pro Gly Pro
545 550 555 560

Ser Gly Pro Ala Gly Glu Val Gly Lys Pro Gly Glu Arg Gly Leu His
565 570 575

Gly Glu Phe Gly Leu Pro Gly Pro Ala Gly Pro Arg Gly Glu Arg Gly
580 585 590

Pro Pro Gly Glu Ser Gly Ala Ala Gly Pro Thr Gly Pro Ile Gly Ser
595 600 605

Arg Gly Pro Ser Gly Pro Pro Gly Pro Asp Gly Asn Lys Gly Glu Pro
610 615 620

Gly Val Val Gly Ala Val Gly Thr Ala Gly Pro Ser Gly Pro Ser Gly
625 630 635 640

Leu Pro Gly Glu Arg Gly Ala Ala Gly Ile Pro Gly Gly Lys Gly Glu
645 650 655

Lys Gly Glu Pro Gly Leu Arg Gly Glu Ile Gly Asn Pro Gly Arg Asp
660 665 670

Gly Ala Arg Gly Ala His Gly Ala Val Gly Ala Pro Gly Pro Ala Gly
675 680 685

Ala Thr Gly Asp Arg Gly Glu Ala Gly Ala Ala Gly Pro Ala Gly Pro
690 695 700

Ala Gly Pro Arg Gly Ser Pro Gly Glu Arg Gly Glu Val Gly Pro Ala
705 710 715 720

Gly Pro Asn Gly Phe Ala Gly Pro Ala Gly Ala Ala Gly Gln Pro Gly
725 730 735

Ala Lys Gly Glu Arg Gly Gly Lys Gly Pro Lys Gly Glu Asn Gly Val
740 745 750

Val Gly Pro Thr Gly Pro Val Gly Ala Ala Gly Pro Ala Gly Pro Asn
755 760 765

Gly Pro Pro Gly Pro Ala Gly Ser Arg Gly Asp Gly Gly Pro Pro Gly
770 775 780

Met Thr Gly Phe Pro Gly Ala Ala Gly Arg Thr Gly Pro Pro Gly Pro
785 790 795 800

Ser Gly Ile Ser Gly Pro Pro Gly Pro Pro Gly Pro Ala Gly Lys Glu
 805 810 815
 Gly Leu Arg Gly Pro Arg Gly Asp Gln Gly Pro Val Gly Arg Thr Gly
 820 825 830
 Glu Val Gly Ala Val Gly Pro Pro Gly Phe Ala Gly Glu Lys Gly Pro
 835 840 845
 Ser Gly Glu Ala Gly Thr Ala Gly Pro Pro Gly Thr Pro Gly Pro Gln
 850 855 860
 Gly Leu Leu Gly Ala Pro Gly Ile Leu Gly Leu Pro Gly Ser Arg Gly
 865 870 875 880
 Glu Arg Gly Leu Pro Gly Val Ala Gly Ala Val Gly Glu Pro Gly Pro
 885 890 895
 Leu Gly Ile Ala Gly Pro Pro Gly Ala Arg Gly Pro Pro Gly Ala Val
 900 905 910
 Gly Ser Pro Gly Val Asn Gly Ala Pro Gly Glu Ala Gly Arg Asp Gly
 915 920 925
 Asn Pro Gly Asn Asp Gly Pro Pro Gly Arg Asp Gly Gln Pro Gly His
 930 935 940
 Lys Gly Glu Arg Gly Tyr Pro Gly Asn Ile Gly Pro Val Gly Ala Ala
 945 950 955 960
 Gly Ala Pro Gly Pro His Gly Pro Val Gly Pro Ala Gly Lys His Gly
 965 970 975
 Asn Arg Gly Glu Thr Gly Pro Ser Gly Pro Val Gly Pro Ala Gly Ala
 980 985 990
 Val Gly Pro Arg Gly Pro Ser Gly Pro Gln Gly Ile Arg Gly Asp Lys
 995 1000 1005
 Gly Glu Pro Gly Glu Lys Gly Pro Arg Gly Leu Pro Gly Phe Lys
 1010 1015 1020
 Gly His Asn Gly Leu Gln Gly Leu Pro Gly Ile Ala Gly His His
 1025 1030 1035
 Gly Asp Gln Gly Ala Pro Gly Ser Val Gly Pro Ala Gly Pro Arg
 1040 1045 1050

Gly Pro Ala Gly Pro Ser Gly Pro Ala Gly Lys Asp Gly Arg Thr
 1055 1060 1065
 Gly His Pro Gly Thr Val Gly Pro Ala Gly Ile Arg Gly Pro Gln
 1070 1075 1080
 Gly His Gln Gly Pro Ala Gly Pro Pro Gly Pro Pro Gly Pro Pro
 1085 1090 1095
 Gly Pro Pro Gly Val Ser Gly Gly Gly Tyr Asp Phe Gly Tyr Asp
 1100 1105 1110
 Gly Asp Phe Tyr Arg Ala Asp Gln Pro Arg Ser Ala Pro Ser Leu
 1115 1120 1125
 Arg Pro Lys Asp Tyr Glu Val Asp Ala Thr Leu Lys Ser Leu Asn
 1130 1135 1140
 Asn Gln Ile Glu Thr Leu Leu Thr Pro Glu Gly Ser Arg Lys Asn
 1145 1150 1155
 Pro Ala Arg Thr Cys Arg Asp Leu Arg Leu Ser His Pro Glu Trp
 1160 1165 1170
 Ser Ser Gly Tyr Tyr Trp Ile Asp Pro Asn Gln Gly Cys Thr Met
 1175 1180 1185
 Glu Ala Ile Lys Val Tyr Cys Asp Phe Pro Thr Gly Glu Thr Cys
 1190 1195 1200
 Ile Arg Ala Gln Pro Glu Asn Ile Pro Ala Lys Asn Trp Tyr Arg
 1205 1210 1215
 Ser Ser Lys Asp Lys Lys His Val Trp Leu Gly Glu Thr Ile Asn
 1220 1225 1230
 Ala Gly Ser Gln Phe Glu Tyr Asn Val Glu Gly Val Thr Ser Lys
 1235 1240 1245
 Glu Met Ala Thr Gln Leu Ala Phe Met Arg Leu Leu Ala Asn Tyr
 1250 1255 1260
 Ala Ser Gln Asn Ile Thr Tyr His Cys Lys Asn Ser Ile Ala Tyr
 1265 1270 1275
 Met Asp Glu Glu Thr Gly Asn Leu Lys Lys Ala Val Ile Leu Gln
 1280 1285 1290

Gly Ser Asn Asp Val Glu Leu Val Ala Glu Gly Asn Ser Arg Phe
1295 1300 1305

Thr Tyr Thr Val Leu Val Asp Gly Cys Ser Lys Lys Thr Asn Glu
1310 1315 1320

Trp Gly Lys Thr Ile Ile Glu Tyr Lys Thr Asn Lys Pro Ser Arg
1325 1330 1335

Leu Pro Phe Leu Asp Ile Ala Pro Leu Asp Ile Gly Gly Ala Asp
1340 1345 1350

His Glu Phe Phe Val Asp Ile Gly Pro Val Cys Phe Lys
1355 1360 1365

<210> 120
<211> 350
<212> PRT
<213> Homo sapiens
<400> 120

Gly Asn Ala Ala Thr Ala Lys Lys Gly Ser Glu Val Glu Ser Val Lys
1 5 10 15

Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu Asn
20 25 30

Pro Thr Gln Asn Asn Ala Gly Leu Glu Asp Phe Glu Arg Lys Lys Thr
35 40 45

Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys Ala
50 55 60

Thr Glu Gln Tyr Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val Val
65 70 75 80

Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu Gln
85 90 95

Ala Val Asn Phe Pro Phe Leu Val Arg Leu Glu Tyr Ala Phe Lys Asp
100 105 110

Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Pro Gly Gly Glu Met
115 120 125

Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala Arg
130 135 140

Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser Leu
145 150 155 160

Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp His
165 170 175

Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val Lys
180 185 190

Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu
195 200 205

Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala Leu
210 215 220

Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe Ala
225 230 235 240

Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val Arg
245 250 255

Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn Leu
260 265 270

Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asn Gly Val
275 280 285

Ser Asp Ile Lys Thr His Lys Trp Phe Ala Thr Thr Asp Trp Ile Ala
290 295 300

Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Arg Gly
305 310 315 320

Ser Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Asp Ile Arg
325 330 335

Val Ser Ile Thr Glu Lys Cys Ala Lys Glu Phe Gly Glu Phe
340 345 350

<210> 121
<211> 987
<212> PRT
<213> Homo sapiens

<400> 121

Met Glu Leu Arg Val Leu Leu Cys Trp Ala Ser Leu Ala Ala Ala Leu
1 5 10 15

Glu Glu Thr Leu Leu Asn Thr Lys Leu Glu Thr Ala Asp Leu Lys Trp
 20 25 30
 Val Thr Phe Pro Gln Val Asp Gly Gln Trp Glu Glu Leu Ser Gly Leu
 35 40 45
 Asp Glu Glu Gln His Ser Val Arg Thr Tyr Glu Val Cys Asp Val Gln
 50 55 60
 Arg Ala Pro Gly Gln Ala His Trp Leu Arg Thr Gly Trp Val Pro Arg
 65 70 75 80
 Arg Gly Ala Val His Val Tyr Ala Thr Leu Arg Phe Thr Met Leu Glu
 85 90 95
 Cys Leu Ser Leu Pro Arg Ala Gly Arg Ser Cys Lys Glu Thr Phe Thr
 100 105 110
 Val Phe Tyr Tyr Glu Ser Asp Ala Asp Thr Ala Thr Ala Leu Thr Pro
 115 120 125
 Ala Trp Met Glu Asn Pro Tyr Ile Lys Val Asp Thr Val Ala Ala Glu
 130 135 140
 His Leu Thr Arg Lys Arg Pro Gly Ala Glu Ala Thr Gly Lys Val Asn
 145 150 155 160
 Val Lys Thr Leu Arg Leu Gly Pro Leu Ser Lys Ala Gly Phe Tyr Leu
 165 170 175
 Ala Phe Gln Asp Gln Gly Ala Cys Met Ala Leu Leu Ser Leu His Leu
 180 185 190
 Phe Tyr Lys Lys Cys Ala Gln Leu Thr Val Asn Leu Thr Arg Phe Pro
 195 200 205
 Glu Thr Val Pro Arg Glu Leu Val Val Pro Val Ala Gly Ser Cys Val
 210 215 220
 Val Asp Ala Val Pro Ala Pro Gly Pro Ser Pro Ser Leu Tyr Cys Arg
 225 230 235 240
 Glu Asp Gly Gln Trp Ala Glu Gln Pro Val Thr Gly Cys Ser Cys Ala
 245 250 255
 Pro Gly Phe Glu Ala Ala Glu Gly Asn Thr Lys Cys Arg Ala Cys Ala
 260 265 270

Gln Gly Thr Phe Lys Pro Leu Ser Gly Glu Gly Ser Cys Gln Pro Cys
 275 280 285

Pro Ala Asn Ser His Ser Asn Thr Ile Gly Ser Ala Val Cys Gln Cys
 290 295 300

Arg Val Gly Tyr Phe Arg Ala Arg Thr Asp Pro Arg Gly Ala Pro Cys
 305 310 315 320

Thr Thr Pro Pro Ser Ala Pro Arg Ser Val Val Ser Arg Leu Asn Gly
 325 330 335

Ser Ser Leu His Leu Glu Trp Ser Ala Pro Leu Glu Ser Gly Gly Arg
 340 345 350

Glu Asp Leu Thr Tyr Ala Leu Arg Cys Arg Glu Cys Arg Pro Gly Gly
 355 360 365

Ser Cys Ala Pro Cys Gly Gly Asp Leu Thr Phe Asp Pro Gly Pro Arg
 370 375 380

Asp Leu Val Glu Pro Trp Val Val Val Arg Gly Leu Arg Pro Asp Phe
 385 390 395 400

Thr Tyr Thr Phe Glu Val Thr Ala Leu Asn Gly Val Ser Ser Leu Ala
 405 410 415

Thr Gly Pro Val Pro Phe Glu Pro Val Asn Val Thr Thr Asp Arg Glu
 420 425 430

Val Pro Pro Ala Val Ser Asp Ile Arg Val Thr Arg Ser Ser Pro Ser
 435 440 445

Ser Leu Ser Leu Ala Trp Ala Val Pro Arg Ala Pro Ser Gly Ala Val
 450 455 460

Leu Asp Tyr Glu Val Lys Tyr His Glu Lys Gly Ala Glu Gly Pro Ser
 465 470 475 480

Ser Val Arg Phe Leu Lys Thr Ser Glu Asn Arg Ala Glu Leu Arg Gly
 485 490 495

Leu Lys Arg Gly Ala Ser Tyr Leu Val Gln Val Arg Ala Arg Ser Glu
 500 505 510

Ala Gly Tyr Gly Pro Phe Gly Gln Glu His His Ser Gln Thr Gln Leu
 515 520 525

Asp Glu Ser Glu Gly Trp Arg Glu Gln Leu Ala Leu Ile Ala Gly Thr
530 535 540

Ala Val Val Gly Val Val Leu Val Leu Val Val Ile Val Val Ala Val
545 550 555 560

Leu Cys Leu Arg Lys Gln Ser Asn Gly Arg Glu Ala Glu Tyr Ser Asp
565 570 575

Lys His Gly Gln Tyr Leu Ile Gly His Gly Thr Lys Val Tyr Ile Asp
580 585 590

Pro Phe Thr Tyr Glu Asp Pro Asn Glu Ala Val Arg Glu Phe Ala Lys
595 600 605

Glu Ile Asp Val Ser Tyr Val Lys Ile Glu Glu Val Ile Gly Ala Gly
610 615 620

Glu Phe Gly Glu Val Cys Arg Gly Arg Leu Lys Ala Pro Gly Lys Lys
625 630 635 640

Glu Ser Cys Val Ala Ile Lys Thr Leu Lys Gly Gly Tyr Thr Glu Arg
645 650 655

Gln Arg Arg Glu Phe Leu Ser Glu Ala Ser Ile Met Gly Gln Phe Glu
660 665 670

His Pro Asn Ile Ile Arg Leu Glu Gly Val Val Thr Asn Ser Met Pro
675 680 685

Val Met Ile Leu Thr Glu Phe Met Glu Asn Gly Ala Leu Asp Ser Phe
690 695 700

Leu Arg Leu Asn Asp Gly Gln Phe Thr Val Ile Gln Leu Val Gly Met
705 710 715 720

Leu Arg Gly Ile Ala Ser Gly Met Arg Tyr Leu Ala Glu Met Ser Tyr
725 730 735

Val His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val Asn Ser Asn Leu
740 745 750

Val Cys Lys Val Ser Asp Phe Gly Leu Ser Arg Phe Leu Glu Glu Asn
755 760 765

Ser Ser Asp Pro Thr Tyr Thr Ser Ser Leu Gly Gly Lys Ile Pro Ile
770 775 780

Arg Trp Thr Ala Pro Glu Ala Ile Ala Phe Arg Lys Phe Thr Ser Ala
785 790 795 800

Ser Asp Ala Trp Ser Tyr Gly Ile Val Met Trp Glu Val Met Ser Phe
805 810 815

Gly Glu Arg Pro Tyr Trp Asp Met Ser Asn Gln Asp Val Ile Asn Ala
820 825 830

Ile Glu Gln Asp Tyr Arg Leu Pro Pro Pro Pro Asp Cys Pro Thr Ser
835 840 845

Leu His Gln Leu Met Leu Asp Cys Trp Gln Lys Asp Arg Asn Ala Arg
850 855 860

Pro Arg Phe Pro Gln Val Val Ser Ala Leu Asp Lys Met Ile Arg Asn
865 870 875 880

Pro Ala Ser Leu Lys Ile Val Ala Arg Glu Asn Gly Gly Ala Ser His
885 890 895

Pro Leu Leu Asp Gln Arg Gln Pro His Tyr Ser Ala Phe Gly Ser Val
900 905 910

Gly Glu Trp Leu Arg Ala Ile Lys Met Gly Arg Tyr Glu Glu Ser Phe
915 920 925

Ala Ala Ala Gly Phe Gly Ser Phe Glu Leu Val Ser Gln Ile Ser Ala
930 935 940

Glu Asp Leu Leu Arg Ile Gly Val Thr Leu Ala Gly His Gln Lys Lys
945 950 955 960

Ile Leu Ala Ser Val Gln His Met Lys Ser Gln Ala Lys Pro Gly Thr
965 970 975

Pro Gly Gly Thr Gly Gly Pro Ala Pro Gln Tyr
980 985

<210> 122
<211> 774
<212> PRT
<213> Homo sapiens

<400> 122

Met Glu Arg Pro Leu Cys Ser His Leu Cys Ser Cys Leu Ala Met Leu
1 5 10 15

Ala Leu Leu Ser Pro Leu Ser Leu Ala Gln Tyr Asp Ser Trp Pro His
Page 318

20 25 30
 Tyr Pro Glu Tyr Phe Gln Gln Pro Ala Pro Glu Tyr His Gln Pro Gln
 35 40 45
 Ala Pro Ala Asn Val Ala Lys Ile Gln Leu Arg Leu Ala Gly Gln Lys
 50 55 60
 Arg Lys His Ser Glu Gly Arg Val Glu Val Tyr Tyr Asp Gly Gln Trp
 65 70 75 80
 Gly Thr Val Cys Asp Asp Asp Phe Ser Ile His Ala Ala His Val Val
 85 90 95
 Cys Arg Glu Leu Gly Tyr Val Glu Ala Lys Ser Trp Thr Ala Ser Ser
 100 105 110
 Ser Tyr Gly Lys Gly Glu Gly Pro Ile Trp Leu Asp Asn Leu His Cys
 115 120 125
 Thr Gly Asn Glu Ala Thr Leu Ala Ala Cys Thr Ser Asn Gly Trp Gly
 130 135 140
 Val Thr Asp Cys Lys His Thr Glu Asp Val Gly Val Val Cys Ser Asp
 145 150 155 160
 Lys Arg Ile Pro Gly Phe Lys Phe Asp Asn Ser Leu Ile Asn Gln Ile
 165 170 175
 Glu Asn Leu Asn Ile Gln Val Glu Asp Ile Arg Ile Arg Ala Ile Leu
 180 185 190
 Ser Thr Tyr Arg Lys Arg Thr Pro Val Met Glu Gly Tyr Val Glu Val
 195 200 205
 Lys Glu Gly Lys Thr Trp Lys Gln Ile Cys Asp Lys His Trp Thr Ala
 210 215 220
 Lys Asn Ser Arg Val Val Cys Gly Met Phe Gly Phe Pro Gly Glu Arg
 225 230 235 240
 Thr Tyr Asn Thr Lys Val Tyr Lys Met Phe Ala Ser Arg Arg Lys Gln
 245 250 255
 Arg Tyr Trp Pro Phe Ser Met Asp Cys Thr Gly Thr Glu Ala His Ile
 260 265 270
 Ser Ser Cys Lys Leu Gly Pro Gln Val Ser Leu Asp Pro Met Lys Asn
 Page 319

275

280

285

Val Thr Cys Glu Asn Gly Leu Pro Ala Val Val Ser Cys Val Pro Gly
 290 295 300

Gln Val Phe Ser Pro Asp Gly Pro Ser Arg Phe Arg Lys Ala Tyr Lys
 305 310 315 320

Pro Glu Gln Pro Leu Val Arg Leu Arg Gly Gly Ala Tyr Ile Gly Glu
 325 330 335

Gly Arg Val Glu Val Leu Lys Asn Gly Glu Trp Gly Thr Val Cys Asp
 340 345 350

Asp Lys Trp Asp Leu Val Ser Ala Ser Val Val Cys Arg Glu Leu Gly
 355 360 365

Phe Gly Ser Ala Lys Glu Ala Val Thr Gly Ser Arg Leu Gly Gln Gly
 370 375 380

Ile Gly Pro Ile His Leu Asn Glu Ile Gln Cys Thr Gly Asn Glu Lys
 385 390 395 400

Ser Ile Ile Asp Cys Lys Phe Asn Ala Glu Ser Gln Gly Cys Asn His
 405 410 415

Glu Glu Asp Ala Gly Val Arg Cys Asn Thr Pro Ala Met Gly Leu Gln
 420 425 430

Lys Lys Leu Arg Leu Asn Gly Gly Arg Asn Pro Tyr Glu Gly Arg Val
 435 440 445

Glu Val Leu Val Glu Arg Asn Gly Ser Leu Val Trp Gly Met Val Cys
 450 455 460

Gly Gln Asn Trp Gly Ile Val Glu Ala Met Val Val Cys Arg Gln Leu
 465 470 475 480

Gly Leu Gly Phe Ala Ser Asn Ala Phe Gln Glu Thr Trp Tyr Trp His
 485 490 495

Gly Asp Val Asn Ser Asn Lys Val Val Met Ser Gly Val Lys Cys Ser
 500 505 510

Gly Thr Glu Leu Ser Leu Ala His Cys Arg His Asp Gly Glu Asp Val
 515 520 525

Ala Cys Pro Gln Gly Gly Val Gln Tyr Gly Ala Gly Val Ala Cys Ser
 Page 320

530

535

540

Glu Thr Ala Pro Asp Leu Val Leu Asn Ala Glu Met Val Gln Gln Thr
 545 550 555 560

Thr Tyr Leu Glu Asp Arg Pro Met Phe Met Leu Gln Cys Ala Met Glu
 565 570 575

Glu Asn Cys Leu Ser Ala Ser Ala Ala Gln Thr Asp Pro Thr Thr Gly
 580 585 590

Tyr Arg Arg Leu Leu Arg Phe Ser Ser Gln Ile His Asn Asn Gly Gln
 595 600 605

Ser Asp Phe Arg Pro Lys Asn Gly Arg His Ala Trp Ile Trp His Asp
 610 615 620

Cys His Arg His Tyr His Ser Met Glu Val Phe Thr His Tyr Asp Leu
 625 630 635 640

Leu Asn Leu Asn Gly Thr Lys Val Ala Glu Gly His Lys Ala Ser Phe
 645 650 655

Cys Leu Glu Asp Thr Glu Cys Glu Gly Asp Ile Gln Lys Asn Tyr Glu
 660 665 670

Cys Ala Asn Phe Gly Asp Gln Gly Ile Thr Met Gly Cys Trp Asp Met
 675 680 685

Tyr Arg His Asp Ile Asp Cys Gln Trp Val Asp Ile Thr Asp Val Pro
 690 695 700

Pro Gly Asp Tyr Leu Phe Gln Val Val Ile Asn Pro Asn Phe Glu Val
 705 710 715 720

Ala Glu Ser Asp Tyr Ser Asn Asn Ile Met Lys Cys Arg Ser Arg Tyr
 725 730 735

Asp Gly His Arg Ile Trp Met Tyr Asn Cys His Ile Gly Gly Ser Phe
 740 745 750

Ser Glu Glu Thr Glu Lys Lys Phe Glu His Phe Ser Gly Leu Leu Asn
 755 760 765

Asn Gln Leu Ser Pro Gln
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<211> 297
<212> PRT
<213> Homo sapiens

<400> 123

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1 5 10 15

Val Val Tyr Lys Gly Arg His Lys Thr Thr Gly Gln Val Val Ala Met
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Lys Lys Ile Arg Leu Glu Ser Glu Glu Gly Val Pro Ser Thr Ala
35 40 45

Ile Arg Glu Ile Ser Leu Leu Lys Glu Leu Arg His Pro Asn Ile Val
50 55 60

Ser Leu Gln Asp Val Leu Met Gln Asp Ser Arg Leu Tyr Leu Ile Phe
65 70 75 80

Glu Phe Leu Ser Met Asp Leu Lys Lys Tyr Leu Asp Ser Ile Pro Pro
85 90 95

Gly Gln Tyr Met Asp Ser Ser Leu Val Lys Ser Tyr Leu Tyr Gln Ile
100 105 110

Leu Gln Gly Ile Val Phe Cys His Ser Arg Arg Val Leu His Arg Asp
115 120 125

Leu Lys Pro Gln Asn Leu Leu Ile Asp Asp Lys Gly Thr Ile Lys Leu
130 135 140

Ala Asp Phe Gly Leu Ala Arg Ala Phe Gly Ile Pro Ile Arg Val Tyr
145 150 155 160

Thr His Glu Val Val Thr Leu Trp Tyr Arg Ser Pro Glu Val Leu Leu
165 170 175

Gly Ser Ala Arg Tyr Ser Thr Pro Val Asp Ile Trp Ser Ile Gly Thr
180 185 190

Ile Phe Ala Glu Leu Ala Thr Lys Lys Pro Leu Phe His Gly Asp Ser
195 200 205

Glu Ile Asp Gln Leu Phe Arg Ile Phe Arg Ala Leu Gly Thr Pro Asn
210 215 220

Asn Glu Val Trp Pro Glu Val Glu Ser Leu Gln Asp Tyr Lys Asn Thr
225 230 235 240

Phe Pro Lys Trp Lys Pro Gly Ser Leu Ala Ser His Val Lys Asn Leu
245 250 255

Asp Glu Asn Gly Leu Asp Leu Leu Ser Lys Met Leu Ile Tyr Asp Pro
260 265 270

Ala Lys Arg Ile Ser Gly Lys Met Ala Leu Asn His Pro Tyr Phe Asn
275 280 285

Asp Leu Asp Asn Gln Ile Lys Lys Met
290 295

<210> 124
<211> 145
<212> PRT
<213> Homo sapiens

<400> 124

Met Arg Gln Ala Gly Glu Val Thr Phe Ala Asp Ala His Arg Pro Lys
1 5 10 15

Leu Asn Glu Gly Val Val Glu Phe Ala Ser Tyr Gly Asp Leu Lys Asn
20 25 30

Ala Ile Glu Lys Leu Ser Gly Lys Glu Ile Asn Gly Arg Lys Ile Lys
35 40 45

Leu Ile Glu Gly Ser Lys Arg His Ser Arg Ser Arg Ser Arg Ser Arg
50 55 60

Ser Arg Thr Arg Ser Ser Ser Arg Ser Arg Ser Arg Ser Arg Ser Arg
65 70 75 80

Ser Arg Lys Ser Tyr Ser Arg Ser Arg Ser Arg Ser Arg Ser Arg Ser
85 90 95

Arg Ser Lys Ser Arg Ser Val Ser Arg Ser Pro Val Pro Glu Lys Ser
100 105 110

Gln Lys Arg Gly Ser Ser Ser Arg Ser Lys Ser Pro Ala Ser Val Asp
115 120 125

Arg Gln Arg Ser Arg Ser Arg Ser Arg Ser Arg Ser Val Asp Ser Gly
130 135 140

Asn
145

<210> 125
 <211> 814
 <212> PRT
 <213> Homo sapiens

<400> 125

Met Gln Asp Ala Glu Asn Val Ala Val Pro Glu Ala Ala Glu Glu Arg
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 Ala Glu Pro Gly Gln Gln Gln Pro Ala Ala Glu Pro Pro Pro Ala Glu
 20 25 30
 Gly Leu Leu Arg Pro Ala Gly Pro Gly Ala Pro Glu Ala Ala Gly Thr
 35 40 45
 Glu Ala Ser Ser Glu Glu Val Gly Ile Ala Glu Ala Gly Pro Glu Pro
 50 55 60
 Glu Val Arg Thr Glu Pro Ala Ala Glu Ala Glu Ala Ala Ser Gly Pro
 65 70 75 80
 Ser Glu Ser Pro Ser Pro Pro Ala Ala Glu Glu Leu Pro Gly Ser His
 85 90 95
 Ala Glu Pro Pro Val Pro Ala Gln Gly Glu Ala Pro Gly Glu Gln Ala
 100 105 110
 Arg Asp Glu Arg Ser Asp Ser Arg Ala Gln Ala Val Ser Glu Asp Ala
 115 120 125
 Gly Gly Asn Glu Gly Arg Ala Ala Glu Ala Glu Pro Arg Ala Leu Glu
 130 135 140
 Asn Gly Asp Ala Asp Glu Pro Ser Phe Ser Asp Pro Glu Asp Phe Val
 145 150 155 160
 Asp Asp Val Ser Glu Glu Glu Leu Leu Gly Asp Val Leu Lys Asp Arg
 165 170 175
 Pro Gln Glu Ala Asp Gly Ile Asp Ser Val Ile Val Val Asp Asn Val
 180 185 190
 Pro Gln Val Gly Pro Asp Arg Leu Glu Lys Leu Lys Asn Val Ile His
 195 200 205
 Lys Ile Phe Ser Lys Phe Gly Lys Ile Thr Asn Asp Phe Tyr Pro Glu
 210 215 220

Glu Asp Gly Lys Thr Lys Gly Tyr Ile Phe Leu Glu Tyr Ala Ser Pro
 225 230 235 240
 Ala His Ala Val Asp Ala Val Lys Asn Ala Asp Gly Tyr Lys Leu Asp
 245 250 255
 Lys Gln His Thr Phe Arg Val Asn Leu Phe Thr Asp Phe Asp Lys Tyr
 260 265 270
 Met Thr Ile Ser Asp Glu Trp Asp Ile Pro Glu Lys Gln Pro Phe Lys
 275 280 285
 Asp Leu Gly Asn Leu Arg Tyr Trp Leu Glu Glu Ala Glu Cys Arg Asp
 290 295 300
 Gln Tyr Ser Val Ile Phe Glu Ser Gly Asp Arg Thr Ser Ile Phe Trp
 305 310 315 320
 Asn Asp Val Lys Asp Pro Val Ser Ile Glu Glu Arg Ala Arg Trp Thr
 325 330 335
 Glu Thr Tyr Val Arg Trp Ser Pro Lys Gly Thr Tyr Leu Ala Thr Phe
 340 345 350
 His Gln Arg Gly Ile Ala Leu Trp Gly Gly Glu Lys Phe Lys Gln Ile
 355 360 365
 Gln Arg Phe Ser His Gln Gly Val Gln Leu Ile Asp Phe Ser Pro Cys
 370 375 380
 Glu Arg Tyr Leu Val Thr Phe Ser Pro Leu Met Asp Thr Gln Asp Asp
 385 390 395 400
 Pro Gln Ala Ile Ile Ile Trp Asp Ile Leu Thr Gly His Lys Lys Arg
 405 410 415
 Gly Phe His Cys Glu Ser Ser Ala His Trp Pro Ile Phe Lys Trp Ser
 420 425 430
 His Asp Gly Lys Phe Phe Ala Arg Met Thr Leu Asp Thr Leu Ser Ile
 435 440 445
 Tyr Glu Thr Pro Ser Met Gly Leu Leu Asp Lys Lys Ser Leu Lys Ile
 450 455 460
 Ser Gly Ile Lys Asp Phe Ser Trp Ser Pro Gly Gly Asn Ile Ile Ala
 465 470 475 480

Phe Trp Val Pro Glu Asp Lys Asp Ile Pro Ala Arg Val Thr Leu Met
485 490 495
Gln Leu Pro Thr Arg Gln Glu Ile Arg Val Arg Asn Leu Phe Asn Val
500 505 510
Val Asp Cys Lys Leu His Trp Gln Lys Asn Gly Asp Tyr Leu Cys Val
515 520 525
Lys Val Asp Arg Thr Pro Lys Gly Thr Gln Gly Val Val Thr Asn Phe
530 535 540
Glu Ile Phe Arg Met Arg Glu Lys Gln Val Pro Val Asp Val Val Glu
545 550 555 560
Met Lys Glu Thr Ile Ile Ala Phe Ala Trp Glu Pro Asn Gly Ser Lys
565 570 575
Phe Ala Val Leu His Gly Glu Ala Pro Arg Ile Ser Val Ser Phe Tyr
580 585 590
His Val Lys Asn Asn Gly Lys Ile Glu Leu Ile Lys Met Phe Asp Lys
595 600 605
Gln Gln Ala Asn Thr Ile Phe Trp Ser Pro Gln Gly Gln Phe Val Val
610 615 620
Leu Ala Gly Leu Arg Ser Met Asn Gly Ala Leu Ala Phe Val Asp Thr
625 630 635 640
Ser Asp Cys Thr Val Met Asn Ile Ala Glu His Tyr Met Ala Ser Asp
645 650 655
Val Glu Trp Asp Pro Thr Gly Arg Tyr Val Val Thr Ser Val Ser Trp
660 665 670
Trp Ser His Lys Val Asp Asn Ala Tyr Trp Leu Trp Thr Phe Gln Gly
675 680 685
Arg Leu Leu Gln Lys Asn Asn Lys Asp Arg Phe Cys Gln Leu Leu Trp
690 695 700
Arg Pro Arg Pro Pro Thr Leu Leu Ser Gln Glu Gln Ile Lys Gln Ile
705 710 715 720
Lys Lys Asp Leu Lys Lys Tyr Ser Lys Ile Phe Glu Gln Lys Asp Arg
725 730 735

Leu Ser Gln Ser Lys Ala Ser Lys Glu Leu Val Glu Arg Arg Arg Thr
740 745 750

Met Met Glu Asp Phe Arg Lys Tyr Arg Lys Met Ala Gln Glu Leu Tyr
755 760 765

Met Glu Gln Lys Asn Glu Arg Leu Glu Leu Arg Gly Gly Val Asp Thr
770 775 780

Asp Glu Leu Asp Ser Asn Val Asp Asp Trp Glu Glu Glu Thr Ile Glu
785 790 795 800

Phe Phe Val Thr Glu Glu Ile Ile Pro Leu Gly Asn Gln Glu
805 810

<210> 126
<211> 197
<212> PRT
<213> Homo sapiens

<400> 126

Met Pro Ala Pro Ser Met Asp Cys Asp Val Ser Thr Leu Val Ala Cys
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Val Val Asp Val Glu Val Phe Thr Asn Gln Glu Val Lys Glu Lys Phe
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Gly Gly Leu Phe Arg Thr Tyr Asp Asp Cys Val Thr Phe Gln Leu Phe
35 40 45

Lys Ser Phe Arg Arg Val Arg Ile Asn Phe Ser Asn Pro Lys Ser Ala
50 55 60

Ala Arg Ala Arg Ile Glu Leu His Glu Thr Gln Phe Arg Gly Lys Lys
65 70 75 80

Leu Lys Leu Tyr Phe Ala Gln Val Gln Thr Pro Glu Thr Asp Gly Asp
85 90 95

Lys Leu His Leu Ala Pro Pro Gln Pro Ala Lys Gln Phe Leu Ile Ser
100 105 110

Pro Pro Ser Ser Pro Pro Val Ser Trp Gln Pro Ile Asn Asp Ala Thr
115 120 125

Pro Val Leu Asn Tyr Asp Leu Leu Tyr Ala Val Ala Lys Leu Gly Pro
130 135 140

Gly Glu Lys Tyr Glu Leu His Ala Gly Thr Glu Ser Thr Pro Ser Val
Page 327

145 150 155 160

Val Val His Val Cys Asp Ser Asp Ile Glu Glu Glu Asp Pro Lys
165 170 175

Thr Ser Pro Lys Pro Lys Ile Ile Gln Thr Arg Arg Pro Gly Leu Pro
180 185 190

Pro Ser Val Ser Asn
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<210> 127
<211> 1390
<212> PRT
<213> Homo sapiens

<400> 127

Met Lys Ala Pro Ala Val Leu Ala Pro Gly Ile Leu Val Leu Leu Phe
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Thr Leu Val Gln Arg Ser Asn Gly Glu Cys Lys Glu Ala Leu Ala Lys
20 25 30

Ser Glu Met Asn Val Asn Met Lys Tyr Gln Leu Pro Asn Phe Thr Ala
35 40 45

Glu Thr Pro Ile Gln Asn Val Ile Leu His Glu His His Ile Phe Leu
50 55 60

Gly Ala Thr Asn Tyr Ile Tyr Val Leu Asn Glu Glu Asp Leu Gln Lys
65 70 75 80

Val Ala Glu Tyr Lys Thr Gly Pro Val Leu Glu His Pro Asp Cys Phe
85 90 95

Pro Cys Gln Asp Cys Ser Ser Lys Ala Asn Leu Ser Gly Gly Val Trp
100 105 110

Lys Asp Asn Ile Asn Met Ala Leu Val Val Asp Thr Tyr Tyr Asp Asp
115 120 125

Gln Leu Ile Ser Cys Gly Ser Val Asn Arg Gly Thr Cys Gln Arg His
130 135 140

Val Phe Pro His Asn His Thr Ala Asp Ile Gln Ser Glu Val His Cys
145 150 155 160

Ile Phe Ser Pro Gln Ile Glu Glu Pro Ser Gln Cys Pro Asp Cys Val
165 170 175

Val Ser Ala Leu Gly Ala Lys Val Leu Ser Ser Val Lys Asp Arg Phe
180 185 190
Ile Asn Phe Phe Val Gly Asn Thr Ile Asn Ser Ser Tyr Phe Pro Asp
195 200 205
His Pro Leu His Ser Ile Ser Val Arg Arg Leu Lys Glu Thr Lys Asp
210 215 220
Gly Phe Met Phe Leu Thr Asp Gln Ser Tyr Ile Asp Val Leu Pro Glu
225 230 235 240
Phe Arg Asp Ser Tyr Pro Ile Lys Tyr Val His Ala Phe Glu Ser Asn
245 250 255
Asn Phe Ile Tyr Phe Leu Thr Val Gln Arg Glu Thr Leu Asp Ala Gln
260 265 270
Thr Phe His Thr Arg Ile Ile Arg Phe Cys Ser Ile Asn Ser Gly Leu
275 280 285
His Ser Tyr Met Glu Met Pro Leu Glu Cys Ile Leu Thr Glu Lys Arg
290 295 300
Lys Lys Arg Ser Thr Lys Lys Glu Val Phe Asn Ile Leu Gln Ala Ala
305 310 315 320
Tyr Val Ser Lys Pro Gly Ala Gln Leu Ala Arg Gln Ile Gly Ala Ser
325 330 335
Leu Asn Asp Asp Ile Leu Phe Gly Val Phe Ala Gln Ser Lys Pro Asp
340 345 350
Ser Ala Glu Pro Met Asp Arg Ser Ala Met Cys Ala Phe Pro Ile Lys
355 360 365
Tyr Val Asn Asp Phe Phe Asn Lys Ile Val Asn Lys Asn Asn Val Arg
370 375 380
Cys Leu Gln His Phe Tyr Gly Pro Asn His Glu His Cys Phe Asn Arg
385 390 395 400
Thr Leu Leu Arg Asn Ser Ser Gly Cys Glu Ala Arg Arg Asp Glu Tyr
405 410 415
Arg Thr Glu Phe Thr Thr Ala Leu Gln Arg Val Asp Leu Phe Met Gly
420 425 430

Gln Phe Ser Glu Val Leu Leu Thr Ser Ile Ser Thr Phe Ile Lys Gly
435 440 445

Asp Leu Thr Ile Ala Asn Leu Gly Thr Ser Glu Gly Arg Phe Met Gln
450 455 460

Val Val Val Ser Arg Ser Gly Pro Ser Thr Pro His Val Asn Phe Leu
465 470 475 480

Leu Asp Ser His Pro Val Ser Pro Glu Val Ile Val Glu His Thr Leu
485 490 495

Asn Gln Asn Gly Tyr Thr Leu Val Ile Thr Gly Lys Lys Ile Thr Lys
500 505 510

Ile Pro Leu Asn Gly Leu Gly Cys Arg His Phe Gln Ser Cys Ser Gln
515 520 525

Cys Leu Ser Ala Pro Pro Phe Val Gln Cys Gly Trp Cys His Asp Lys
530 535 540

Cys Val Arg Ser Glu Glu Cys Leu Ser Gly Thr Trp Thr Gln Gln Ile
545 550 555 560

Cys Leu Pro Ala Ile Tyr Lys Val Phe Pro Asn Ser Ala Pro Leu Glu
565 570 575

Gly Gly Thr Arg Leu Thr Ile Cys Gly Trp Asp Phe Gly Phe Arg Arg
580 585 590

Asn Asn Lys Phe Asp Leu Lys Lys Thr Arg Val Leu Leu Gly Asn Glu
595 600 605

Ser Cys Thr Leu Thr Leu Ser Glu Ser Thr Met Asn Thr Leu Lys Cys
610 615 620

Thr Val Gly Pro Ala Met Asn Lys His Phe Asn Met Ser Ile Ile Ile
625 630 635 640

Ser Asn Gly His Gly Thr Thr Gln Tyr Ser Thr Phe Ser Tyr Val Asp
645 650 655

Pro Val Ile Thr Ser Ile Ser Pro Lys Tyr Gly Pro Met Ala Gly Gly
660 665 670

Thr Leu Leu Thr Leu Thr Gly Asn Tyr Leu Asn Ser Gly Asn Ser Arg
675 680 685

His Ile Ser Ile Gly Gly Lys Thr Cys Thr Leu Lys Ser Val Ser Asn
 690 695 700

Ser Ile Leu Glu Cys Tyr Thr Pro Ala Gln Thr Ile Ser Thr Glu Phe
 705 710 715 720

Ala Val Lys Leu Lys Ile Asp Leu Ala Asn Arg Glu Thr Ser Ile Phe
 725 730 735

Ser Tyr Arg Glu Asp Pro Ile Val Tyr Glu Ile His Pro Thr Lys Ser
 740 745 750

Phe Ile Ser Gly Gly Ser Thr Ile Thr Gly Val Gly Lys Asn Leu Asn
 755 760 765

Ser Val Ser Val Pro Arg Met Val Ile Asn Val His Glu Ala Gly Arg
 770 775 780

Asn Phe Thr Val Ala Cys Gln His Arg Ser Asn Ser Glu Ile Ile Cys
 785 790 795 800

Cys Thr Thr Pro Ser Leu Gln Gln Leu Asn Leu Gln Leu Pro Leu Lys
 805 810 815

Thr Lys Ala Phe Phe Met Leu Asp Gly Ile Leu Ser Lys Tyr Phe Asp
 820 825 830

Leu Ile Tyr Val His Asn Pro Val Phe Lys Pro Phe Glu Lys Pro Val
 835 840 845

Met Ile Ser Met Gly Asn Glu Asn Val Leu Glu Ile Lys Gly Asn Asp
 850 855 860

Ile Asp Pro Glu Ala Val Lys Gly Glu Val Leu Lys Val Gly Asn Lys
 865 870 875 880

Ser Cys Glu Asn Ile His Leu His Ser Glu Ala Val Leu Cys Thr Val
 885 890 895

Pro Asn Asp Leu Leu Lys Leu Asn Ser Glu Leu Asn Ile Glu Trp Lys
 900 905 910

Gln Ala Ile Ser Ser Thr Val Leu Gly Lys Val Ile Val Gln Pro Asp
 915 920 925

Gln Asn Phe Thr Gly Leu Ile Ala Gly Val Val Ser Ile Ser Thr Ala
 930 935 940

Leu Leu Leu Leu Leu Gly Phe Phe Leu Trp Leu Lys Lys Arg Lys Gln
945 950 955 960

Ile Lys Asp Leu Gly Ser Glu Leu Val Arg Tyr Asp Ala Arg Val His
965 970 975

Thr Pro His Leu Asp Arg Leu Val Ser Ala Arg Ser Val Ser Pro Thr
980 985 990

Thr Glu Met Val Ser Asn Glu Ser Val Asp Tyr Arg Ala Thr Phe Pro
995 1000 1005

Glu Asp Gln Phe Pro Asn Ser Ser Gln Asn Gly Ser Cys Arg Gln
1010 1015 1020

Val Gln Tyr Pro Leu Thr Asp Met Ser Pro Ile Leu Thr Ser Gly
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Asp Ser Asp Ile Ser Ser Pro Leu Leu Gln Asn Thr Val His Ile
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Asp Leu Ser Ala Leu Asn Pro Glu Leu Val Gln Ala Val Gln His
1055 1060 1065

Val Val Ile Gly Pro Ser Ser Leu Ile Val His Phe Asn Glu Val
1070 1075 1080

Ile Gly Arg Gly His Phe Gly Cys Val Tyr His Gly Thr Leu Leu
1085 1090 1095

Asp Asn Asp Gly Lys Lys Ile His Cys Ala Val Lys Ser Leu Asn
1100 1105 1110

Arg Ile Thr Asp Ile Gly Glu Val Ser Gln Phe Leu Thr Glu Gly
1115 1120 1125

Ile Ile Met Lys Asp Phe Ser His Pro Asn Val Leu Ser Leu Leu
1130 1135 1140

Gly Ile Cys Leu Arg Ser Glu Gly Ser Pro Leu Val Val Leu Pro
1145 1150 1155

Tyr Met Lys His Gly Asp Leu Arg Asn Phe Ile Arg Asn Glu Thr
1160 1165 1170

His Asn Pro Thr Val Lys Asp Leu Ile Gly Phe Gly Leu Gln Val
1175 1180 1185

Ala Lys Gly Met Lys Tyr Leu Ala Ser Lys Lys Phe Val His Arg
 1190 1195 1200
 Asp Leu Ala Ala Arg Asn Cys Met Leu Asp Glu Lys Phe Thr Val
 1205 1210 1215
 Lys Val Ala Asp Phe Gly Leu Ala Arg Asp Met Tyr Asp Lys Glu
 1220 1225 1230
 Tyr Tyr Ser Val His Asn Lys Thr Gly Ala Lys Leu Pro Val Lys
 1235 1240 1245
 Trp Met Ala Leu Glu Ser Leu Gln Thr Gln Lys Phe Thr Thr Lys
 1250 1255 1260
 Ser Asp Val Trp Ser Phe Gly Val Val Leu Trp Glu Leu Met Thr
 1265 1270 1275
 Arg Gly Ala Pro Pro Tyr Pro Asp Val Asn Thr Phe Asp Ile Thr
 1280 1285 1290
 Val Tyr Leu Leu Gln Gly Arg Arg Leu Leu Gln Pro Glu Tyr Cys
 1295 1300 1305
 Pro Asp Pro Leu Tyr Glu Val Met Leu Lys Cys Trp His Pro Lys
 1310 1315 1320
 Ala Glu Met Arg Pro Ser Phe Ser Glu Leu Val Ser Arg Ile Ser
 1325 1330 1335
 Ala Ile Phe Ser Thr Phe Ile Gly Glu His Tyr Val His Val Asn
 1340 1345 1350
 Ala Thr Tyr Val Asn Val Lys Cys Val Ala Pro Tyr Pro Ser Leu
 1355 1360 1365
 Leu Ser Ser Glu Asp Asn Ala Asp Asp Glu Val Asp Thr Arg Pro
 1370 1375 1380
 Ala Ser Phe Trp Glu Thr Ser
 1385 1390

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 <211> 417
 <212> PRT
 <213> Homo sapiens

<400> 128

Ser Ile Glu Ile Pro Ala Gly Leu Thr Glu Leu Leu Gln Gly Phe Thr
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 Val Glu Val Leu Arg His Gln Pro Ala Asp Leu Leu Glu Phe Ala Leu
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 Gln His Phe Thr Arg Leu Gln Gln Glu Asn Glu Arg Lys Gly Thr Ala
 35 40 45
 Arg Phe Gly His Glu Gly Arg Thr Trp Gly Asp Leu Gly Ala Ala Ala
 50 55 60
 Gly Gly Gly Thr Pro Ser Lys Gly Val Asn Phe Ala Glu Glu Pro Met
 65 70 75 80
 Gln Ser Asp Ser Glu Asp Gly Glu Glu Glu Glu Ala Ala Pro Ala Asp
 85 90 95
 Ala Gly Ala Phe Asn Ala Pro Val Ile Asn Arg Phe Thr Arg Arg Ala
 100 105 110
 Ser Val Cys Ala Glu Ala Tyr Asn Pro Asp Glu Glu Glu Asp Asp Ala
 115 120 125
 Glu Ser Arg Ile Ile His Pro Lys Thr Asp Asp Gln Arg Asn Arg Leu
 130 135 140
 Gln Glu Ala Cys Lys Asp Ile Leu Leu Phe Lys Asn Leu Asp Pro Glu
 145 150 155 160
 Gln Met Ser Gln Val Leu Asp Ala Met Phe Glu Lys Leu Val Lys Asp
 165 170 175
 Gly Glu His Val Ile Asp Gln Gly Asp Asp Gly Asp Asn Phe Tyr Val
 180 185 190
 Ile Asp Arg Gly Thr Phe Asp Ile Tyr Val Lys Cys Asp Gly Val Gly
 195 200 205
 Arg Cys Val Gly Asn Tyr Asp Asn Arg Gly Ser Phe Gly Glu Leu Ala
 210 215 220
 Leu Met Tyr Asn Thr Pro Arg Ala Ala Thr Ile Thr Ala Thr Ser Pro
 225 230 235 240
 Gly Ala Leu Trp Gly Leu Asp Arg Val Thr Phe Arg Arg Ile Ile Val
 245 250 255

Lys Asn Asn Ala Lys Lys Arg Lys Met Tyr Glu Ser Phe Ile Glu Ser
260 265 270

Leu Pro Phe Leu Lys Ser Leu Glu Phe Ser Glu Arg Leu Lys Val Val
275 280 285

Asp Val Ile Gly Thr Lys Val Tyr Asn Asp Gly Glu Gln Ile Ile Ala
290 295 300

Gln Gly Asp Ser Ala Asp Ser Phe Phe Ile Val Glu Ser Gly Glu Val
305 310 315 320

Lys Ile Thr Met Lys Arg Lys Gly Lys Ser Glu Val Glu Glu Asn Gly
325 330 335

Ala Val Glu Met Pro Arg Cys Ser Arg Gly Gln Tyr Phe Gly Glu Leu
340 345 350

Ala Leu Val Thr Asn Lys Pro Arg Ala Ala Ser Ala His Ala Ile Gly
355 360 365

Thr Val Lys Cys Leu Ala Met Asp Val Gln Ala Phe Glu Arg Leu Leu
370 375 380

Gly Pro Cys Met Glu Ile Met Lys Arg Asn Ile Ala Thr Tyr Glu Glu
385 390 395 400

Gln Leu Val Ala Leu Phe Gly Thr Asn Met Asp Ile Val Glu Pro Thr
405 410 415

Ala

<210> 129
<211> 425
<212> PRT
<213> Homo sapiens

<400> 129

Met Gly Pro Arg Arg Leu Leu Leu Val Ala Ala Cys Phe Ser Leu Cys
1 5 10 15

Gly Pro Leu Leu Ser Ala Arg Thr Arg Ala Arg Arg Pro Glu Ser Lys
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Ala Thr Asn Ala Thr Leu Asp Pro Arg Ser Phe Leu Leu Arg Asn Pro
35 40 45

Asn Asp Lys Tyr Glu Pro Phe Trp Glu Asp Glu Glu Lys Asn Glu Ser
 50 55 60
 Gly Leu Thr Glu Tyr Arg Leu Val Ser Ile Asn Lys Ser Ser Pro Leu
 65 70 75 80
 Gln Lys Gln Leu Pro Ala Phe Ile Ser Glu Asp Ala Ser Gly Tyr Leu
 85 90 95
 Thr Ser Ser Trp Leu Thr Leu Phe Val Pro Ser Val Tyr Thr Gly Val
 100 105 110
 Phe Val Val Ser Leu Pro Leu Asn Ile Met Ala Ile Val Val Phe Ile
 115 120 125
 Leu Lys Met Lys Val Lys Lys Pro Ala Val Val Tyr Met Leu His Leu
 130 135 140
 Ala Thr Ala Asp Val Leu Phe Val Ser Val Leu Pro Phe Lys Ile Ser
 145 150 155 160
 Tyr Tyr Phe Ser Gly Ser Asp Trp Gln Phe Gly Ser Glu Leu Cys Arg
 165 170 175
 Phe Val Thr Ala Ala Phe Tyr Cys Asn Met Tyr Ala Ser Ile Leu Leu
 180 185 190
 Met Thr Val Ile Ser Ile Asp Arg Phe Leu Ala Val Val Tyr Pro Met
 195 200 205
 Gln Ser Leu Ser Trp Arg Thr Leu Gly Arg Ala Ser Phe Thr Cys Leu
 210 215 220
 Ala Ile Trp Ala Leu Ala Ile Ala Gly Val Val Pro Leu Leu Leu Lys
 225 230 235 240
 Glu Gln Thr Ile Gln Val Pro Gly Leu Asn Ile Thr Thr Cys His Asp
 245 250 255
 Val Leu Asn Glu Thr Leu Leu Glu Gly Tyr Tyr Ala Tyr Tyr Phe Ser
 260 265 270
 Ala Phe Ser Ala Val Phe Phe Phe Val Pro Leu Ile Ile Ser Thr Val
 275 280 285
 Cys Tyr Val Ser Ile Ile Arg Cys Leu Ser Ser Ser Ala Val Ala Asn
 290 295 300

Arg Ser Lys Lys Ser Arg Ala Leu Phe Leu Ser Ala Ala Val Phe Cys
305 310 315 320

Ile Phe Ile Ile Cys Phe Gly Pro Thr Asn Val Leu Leu Ile Ala His
325 330 335

Tyr Ser Phe Leu Ser His Thr Ser Thr Thr Glu Ala Ala Tyr Phe Ala
340 345 350

Tyr Leu Leu Cys Val Cys Val Ser Ser Ile Ser Cys Cys Ile Asp Pro
355 360 365

Leu Ile Tyr Tyr Tyr Ala Ser Ser Glu Cys Gln Arg Tyr Val Tyr Ser
370 375 380

Ile Leu Cys Cys Lys Glu Ser Ser Asp Pro Ser Ser Tyr Asn Ser Ser
385 390 395 400

Gly Gln Leu Met Ala Ser Lys Met Asp Thr Cys Ser Ser Asn Leu Asn
405 410 415

Asn Ser Ile Tyr Lys Lys Leu Leu Thr
420 425

<210> 130
<211> 364
<212> PRT
<213> Homo sapiens
<400> 130

Met Ala Ala Ile Ser Thr Ser Ile Pro Val Ile Ser Gln Pro Gln Phe
1 5 10 15

Thr Ala Met Asn Glu Pro Gln Cys Phe Tyr Asn Glu Ser Ile Ala Phe
20 25 30

Phe Tyr Asn Arg Ser Gly Lys His Leu Ala Thr Glu Trp Asn Thr Val
35 40 45

Ser Lys Leu Val Met Gly Leu Gly Ile Thr Val Cys Ile Phe Ile Met
50 55 60

Leu Ala Asn Leu Leu Val Met Val Ala Ile Tyr Val Asn Arg Arg Phe
65 70 75 80

His Phe Pro Ile Tyr Tyr Leu Met Ala Asn Leu Ala Ala Ala Asp Phe
85 90 95

Phe Ala Gly Leu Ala Tyr Phe Tyr Leu Met Phe Asn Thr Gly Pro Asn
Page 337

100	105	110
Thr Arg Arg Leu Thr Val Ser Thr Trp Leu Leu Arg Gln Gly Leu Ile 115 120 125		
Asp Thr Ser Leu Thr Ala Ser Val Ala Asn Leu Leu Ala Ile Ala Ile 130 135 140		
Glu Arg His Ile Thr Val Phe Arg Met Gln Leu His Thr Arg Met Ser 145 150 155 160		
Asn Arg Arg Val Val Val Val Ile Val Val Ile Trp Thr Met Ala Ile 165 170 175		
Val Met Gly Ala Ile Pro Ser Val Gly Trp Asn Cys Ile Cys Asp Ile 180 185 190		
Glu Asn Cys Ser Asn Met Ala Pro Leu Tyr Ser Asp Ser Tyr Leu Val 195 200 205		
Phe Trp Ala Ile Phe Asn Leu Val Thr Phe Val Val Met Val Val Leu 210 215 220		
Tyr Ala His Ile Phe Gly Tyr Val Arg Gln Arg Thr Met Arg Met Ser 225 230 235 240		
Arg His Ser Ser Gly Pro Arg Arg Asn Arg Asp Thr Met Met Ser Leu 245 250 255		
Leu Lys Thr Val Val Ile Val Leu Gly Ala Phe Ile Ile Cys Trp Thr 260 265 270		
Pro Gly Leu Val Leu Leu Leu Leu Asp Val Cys Cys Pro Gln Cys Asp 275 280 285		
Val Leu Ala Tyr Glu Lys Phe Phe Leu Leu Leu Ala Glu Phe Asn Ser 290 295 300		
Ala Met Asn Pro Ile Ile Tyr Ser Tyr Arg Asp Lys Glu Met Ser Ala 305 310 315 320		
Thr Phe Arg Gln Ile Leu Cys Cys Gln Arg Ser Glu Asn Pro Thr Gly 325 330 335		
Pro Thr Glu Gly Ser Asp Arg Ser Ala Ser Ser Leu Asn His Thr Ile 340 345 350		
Leu Ala Gly Val His Ser Asn Asp His Ser Val Val		

355

360

<210> 131
 <211> 79
 <212> PRT
 <213> Homo sapiens

<400> 131

Met Ala His Lys Gln Ile Tyr Tyr Ser Asp Lys Tyr Phe Asp Glu His
 1 5 10 15

Tyr Glu Tyr Arg His Val Met Leu Pro Arg Glu Leu Ser Lys Gln Val
 20 25 30

Pro Lys Thr His Leu Met Ser Glu Glu Glu Trp Arg Arg Leu Gly Val
 35 40 45

Gln Gln Ser Leu Gly Trp Val His Tyr Met Ile His Glu Pro Glu Pro
 50 55 60

His Ile Leu Leu Phe Arg Arg Pro Leu Pro Lys Asp Gln Gln Lys
 65 70 75

<210> 132
 <211> 234
 <212> PRT
 <213> Homo sapiens

<400> 132

Met Asn Ser Gly Ala Met Arg Ile His Ser Lys Gly His Phe Gln Gly
 1 5 10 15

Gly Ile Gln Val Lys Asn Glu Lys Asn Arg Pro Ser Leu Lys Ser Leu
 20 25 30

Lys Thr Asp Asn Arg Pro Glu Lys Ser Lys Cys Lys Pro Leu Trp Gly
 35 40 45

Lys Val Phe Tyr Leu Asp Leu Pro Ser Val Thr Ile Ser Glu Lys Leu
 50 55 60

Gln Lys Asp Ile Lys Asp Leu Gly Gly Arg Val Glu Glu Phe Leu Ser
 65 70 75 80

Lys Asp Ile Ser Tyr Leu Ile Ser Asn Lys Lys Glu Ala Lys Phe Ala
 85 90 95

Gln Thr Leu Gly Arg Ile Ser Pro Val Pro Ser Pro Glu Ser Ala Tyr
 100 105 110

Thr Ala Glu Thr Thr Ser Pro His Pro Ser His Asp Gly Ser Ser Phe
115 120 125

Lys Ser Pro Asp Thr Val Cys Leu Ser Arg Gly Lys Leu Leu Val Glu
130 135 140

Lys Ala Ile Lys Asp His Asp Phe Ile Pro Ser Asn Ser Ile Leu Ser
145 150 155 160

Asn Ala Leu Ser Trp Gly Val Lys Ile Leu His Ile Asp Asp Ile Arg
165 170 175

Tyr Tyr Ile Glu Gln Lys Lys Lys Glu Leu Tyr Leu Leu Lys Lys Ser
180 185 190

Ser Thr Ser Val Arg Asp Gly Gly Lys Arg Val Gly Ser Gly Ala Gln
195 200 205

Lys Thr Arg Thr Gly Arg Leu Lys Lys Pro Phe Val Lys Val Glu Asp
210 215 220

Met Ser Gln Ser Pro Ala Val His Leu Met
225 230

<210> 133
<211> 403
<212> PRT
<213> Homo sapiens

<400> 133

Met Gln Arg Ala Val Ser Val Val Ala Arg Leu Gly Phe Arg Leu Gln
1 5 10 15

Ala Phe Pro Pro Ala Leu Cys Arg Pro Leu Ser Cys Ala Gln Glu Val
20 25 30

Leu Arg Arg Thr Pro Leu Tyr Asp Phe His Leu Ala His Gly Gly Lys
35 40 45

Met Val Ala Phe Ala Gly Trp Ser Leu Pro Val Gln Tyr Arg Asp Ser
50 55 60

His Thr Asp Ser His Leu His Thr Arg Gln His Cys Ser Leu Phe Asp
65 70 75 80

Val Ser His Met Leu Gln Thr Lys Ile Leu Gly Ser Asp Arg Val Lys
85 90 95

Leu Met Glu Ser Leu Val Val Gly Asp Ile Ala Glu Leu Arg Pro Asn
 100 105 110

Gln Gly Thr Leu Ser Leu Phe Thr Asn Glu Ala Gly Gly Ile Leu Asp
 115 120 125

Asp Leu Ile Val Thr Asn Thr Ser Glu Gly His Leu Tyr Val Val Ser
 130 135 140

Asn Ala Gly Cys Trp Glu Lys Asp Leu Ala Leu Met Gln Asp Lys Val
 145 150 155 160

Arg Glu Leu Gln Asn Gln Gly Arg Asp Val Gly Leu Glu Val Leu Asp
 165 170 175

Asn Ala Leu Leu Ala Leu Gln Gly Pro Thr Ala Ala Gln Val Leu Gln
 180 185 190

Ala Gly Val Ala Asp Asp Leu Arg Lys Leu Pro Phe Met Thr Ser Ala
 195 200 205

Val Met Glu Val Phe Gly Val Ser Gly Cys Arg Val Thr Arg Cys Gly
 210 215 220

Tyr Thr Gly Glu Asp Gly Val Glu Ile Ser Val Pro Val Ala Gly Ala
 225 230 235 240

Val His Leu Ala Thr Ala Ile Leu Lys Asn Pro Glu Val Lys Leu Ala
 245 250 255

Gly Leu Ala Ala Arg Asp Ser Leu Arg Leu Glu Ala Gly Leu Cys Leu
 260 265 270

Tyr Gly Asn Asp Ile Asp Glu His Thr Thr Pro Val Glu Gly Ser Leu
 275 280 285

Ser Trp Thr Leu Gly Lys Arg Arg Arg Ala Ala Met Asp Phe Pro Gly
 290 295 300

Ala Lys Val Ile Val Pro Gln Leu Lys Gly Arg Val Gln Arg Arg Arg
 305 310 315 320

Val Gly Leu Met Cys Glu Gly Ala Pro Met Arg Ala His Ser Pro Ile
 325 330 335

Leu Asn Met Glu Gly Thr Lys Ile Gly Thr Val Thr Ser Gly Cys Pro
 340 345 350

Ser Pro Ser Leu Lys Lys Asn Val Ala Met Gly Tyr Val Pro Cys Glu
355 360 365

Tyr Ser Arg Pro Gly Thr Met Leu Leu Val Glu Val Arg Arg Lys Gln
370 375 380

Gln Met Ala Val Val Ser Lys Met Pro Phe Val Pro Thr Asn Tyr Tyr
385 390 395 400

Thr Leu Lys

<210> 134
<211> 526
<212> PRT
<213> Homo sapiens

<400> 134

Met Asp Val Arg Phe Tyr Pro Pro Val Ala Gln Pro Ala Ala Ala Pro
1 5 10 15

Asp Ala Pro Cys Leu Gly Pro Ser Pro Cys Leu Asp Pro Tyr Tyr Cys
20 25 30

Asn Lys Phe Asp Gly Glu Asn Met Tyr Met Ser Met Thr Glu Pro Ser
35 40 45

Gln Asp Tyr Val Pro Ala Ser Gln Ser Tyr Pro Gly Pro Ser Leu Glu
50 55 60

Ser Glu Asp Phe Asn Ile Pro Pro Ile Thr Pro Pro Ser Leu Pro Asp
65 70 75 80

His Ser Leu Val His Leu Asn Glu Val Glu Ser Gly Tyr His Ser Leu
85 90 95

Cys His Pro Met Asn His Asn Gly Leu Leu Pro Phe His Pro Gln Asn
100 105 110

Met Asp Leu Pro Glu Ile Thr Val Ser Asn Met Leu Gly Gln Asp Gly
115 120 125

Thr Leu Leu Ser Asn Ser Ile Ser Val Met Pro Asp Ile Arg Asn Pro
130 135 140

Glu Gly Thr Gln Tyr Ser Ser His Pro Gln Met Ala Ala Met Arg Pro
145 150 155 160

Arg Gly Gln Pro Ala Asp Ile Arg Gln Gln Pro Gly Met Met Pro His
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165.

170

175

Gly Gln Leu Thr Thr Ile Asn Gln Ser Gln Leu Ser Ala Gln Leu Gly
 180 185 190

Leu Asn Met Gly Gly Ser Asn Val Pro His Asn Ser Pro Ser Pro Pro
 195 200 205

Gly Ser Lys Ser Ala Thr Pro Ser Pro Ser Ser Ser Val His Glu Asp
 210 215 220

Glu Gly Asp Asp Thr Ser Lys Ile Asn Gly Gly Glu Lys Arg Pro Ala
 225 230 235 240

Ser Asp Met Gly Lys Lys Pro Lys Thr Pro Lys Lys Lys Lys Lys Lys
 245 250 255

Asp Pro Asn Glu Pro Gln Lys Pro Val Ser Ala Tyr Ala Leu Phe Phe
 260 265 270

Arg Asp Thr Gln Ala Ala Ile Lys Gly Gln Asn Pro Asn Ala Thr Phe
 275 280 285

Gly Glu Val Ser Lys Ile Val Ala Ser Met Trp Asp Gly Leu Gly Glu
 290 295 300

Glu Gln Lys Gln Val Tyr Lys Lys Lys Thr Glu Ala Ala Lys Lys Glu
 305 310 315 320

Tyr Leu Lys Gln Leu Ala Ala Tyr Arg Ala Ser Leu Val Ser Lys Ser
 325 330 335

Tyr Ser Glu Pro Val Asp Val Lys Thr Ser Gln Pro Pro Gln Leu Ile
 340 345 350

Asn Ser Lys Pro Ser Val Phe His Gly Pro Ser Gln Ala His Ser Ala
 355 360 365

Leu Tyr Leu Ser Ser His Tyr His Gln Gln Pro Gly Met Asn Pro His
 370 375 380

Leu Thr Ala Met His Pro Ser Leu Pro Arg Asn Ile Ala Pro Lys Pro
 385 390 395 400

Asn Asn Gln Met Pro Val Thr Val Ser Ile Ala Asn Met Ala Val Ser
 405 410 415

Pro Pro Pro Pro Leu Gln Ile Ser Pro Pro Leu His Gln His Leu Asn
 Page 343

Glu Arg Leu Cys Tyr Asn Asp Thr Phe Glu Ser Leu Val Leu Asn Gly
 130 135 140
 Asn Val Val Ser Gln Leu Trp Ile Pro Asp Thr Phe Phe Arg Asn Ser
 145 150 155 160
 Lys Arg Thr His Glu His Glu Ile Thr Met Pro Asn Gln Met Val Arg
 165 170 175
 Ile Tyr Lys Asp Gly Lys Val Leu Tyr Thr Ile Arg Met Thr Ile Asp
 180 185 190
 Ala Gly Cys Ser Leu His Met Leu Arg Phe Pro Met Asp Ser His Ser
 195 200 205
 Cys Pro Leu Ser Phe Ser Ser Phe Ser Tyr Pro Glu Asn Glu Met Ile
 210 215 220
 Tyr Lys Trp Glu Asn Phe Lys Leu Glu Ile Asn Glu Lys Asn Ser Trp
 225 230 235 240
 Lys Leu Phe Gln Phe Asp Phe Thr Gly Val Ser Asn Lys Thr Glu Ile
 245 250 255
 Ile Thr Thr Pro Val Gly Asp Phe Met Val Met Thr Ile Phe Phe Asn
 260 265 270
 Val Ser Arg Arg Phe Gly Tyr Val Ala Phe Gln Asn Tyr Val Pro Ser
 275 280 285
 Ser Val Thr Thr Met Leu Ser Trp Val Ser Phe Trp Ile Lys Thr Glu
 290 295 300
 Ser Ala Pro Ala Arg Thr Ser Leu Gly Ile Thr Ser Val Leu Thr Met
 305 310 315 320
 Thr Thr Leu Gly Thr Phe Ser Arg Lys Asn Phe Pro Arg Val Ser Tyr
 325 330 335
 Ile Thr Ala Leu Asp Phe Tyr Ile Ala Ile Cys Phe Val Phe Cys Phe
 340 345 350
 Cys Ala Leu Leu Glu Phe Ala Val Leu Asn Phe Leu Ile Tyr Asn Gln
 355 360 365
 Thr Lys Ala His Ala Ser Pro Lys Leu Arg His Pro Arg Ile Asn Ser
 370 375 380

Arg Ala His Ala Arg Thr Arg Ala Arg Ser Arg Ala Cys Ala Arg Gln
385 390 395 400

His Gln Glu Ala Phe Val Cys Gln Ile Val Thr Thr Glu Gly Ser Asp
405 410 415

Gly Glu Glu Arg Pro Ser Cys Ser Ala Gln Gln Pro Pro Ser Pro Gly
420 425 430

Ser Pro Glu Gly Pro Arg Ser Leu Cys Ser Lys Leu Ala Cys Cys Glu
435 440 445

Trp Cys Lys Arg Phe Lys Lys Tyr Phe Cys Met Val Pro Asp Cys Glu
450 455 460

Gly Ser Thr Trp Gln Gln Gly Arg Leu Cys Ile His Val Tyr Arg Leu
465 470 475 480

Asp Asn Tyr Ser Arg Val Val Phe Pro Val Thr Phe Phe Phe Phe Asn
485 490 495

Val Leu Tyr Trp Leu Val Cys Leu Asn Leu
500 505

<210> 136
<211> 1581
<212> PRT
<213> Homo sapiens

<400> 136

Met Arg Lys Arg Lys Ile Ser Val Cys Gln Gln Thr Trp Ala Leu Leu
1 5 10 15

Cys Lys Asn Phe Leu Lys Lys Trp Arg Met Lys Arg Glu Ser Leu Met
20 25 30

Glu Trp Leu Asn Ser Leu Leu Leu Leu Cys Leu Tyr Ile Tyr Pro
35 40 45

His Ser His Gln Val Asn Asp Phe Ser Ser Leu Leu Thr Met Asp Leu
50 55 60

Gly Arg Val Asp Thr Phe Asn Glu Ser Arg Phe Ser Val Val Tyr Thr
65 70 75 80

Pro Val Thr Asn Thr Thr Gln Gln Ile Met Asn Lys Val Ala Ser Thr
85 90 95

Pro Phe Leu Ala Gly Lys Glu Val Leu Gly Leu Pro Asp Glu Glu Ser
 100 105 110
 Ile Lys Glu Phe Thr Ala Asn Tyr Pro Glu Glu Ile Val Arg Val Thr
 115 120 125
 Phe Thr Asn Thr Tyr Ser Tyr His Leu Lys Phe Leu Leu Gly His Gly
 130 135 140
 Met Pro Ala Lys Lys Glu His Lys Asp His Thr Ala His Cys Tyr Glu
 145 150 155 160
 Thr Asn Glu Asp Val Tyr Cys Glu Val Ser Val Phe Trp Lys Glu Gly
 165 170 175
 Phe Val Ala Leu Gln Ala Ala Ile Asn Ala Ala Ile Ile Glu Ile Thr
 180 185 190
 Thr Asn His Ser Val Met Glu Glu Leu Met Ser Val Thr Gly Lys Asn
 195 200 205
 Met Lys Met His Ser Phe Ile Gly Gln Ser Gly Val Ile Thr Asp Leu
 210 215 220
 Tyr Leu Phe Ser Cys Ile Ile Ser Phe Ser Ser Phe Ile Tyr Tyr Ala
 225 230 235 240
 Ser Val Asn Val Thr Arg Glu Arg Lys Arg Met Lys Ala Leu Met Thr
 245 250 255
 Met Met Gly Leu Arg Asp Ser Ala Phe Trp Leu Ser Trp Gly Leu Leu
 260 265 270
 Tyr Ala Gly Phe Ile Phe Ile Met Ala Leu Phe Leu Ala Leu Val Ile
 275 280 285
 Arg Ser Thr Gln Phe Ile Ile Leu Ser Gly Phe Met Val Val Phe Ser
 290 295 300
 Leu Phe Leu Leu Tyr Gly Leu Ser Leu Val Ala Leu Ala Phe Leu Met
 305 310 315 320
 Ser Ile Leu Val Lys Lys Ser Phe Leu Thr Gly Leu Val Val Phe Leu
 325 330 335
 Leu Thr Val Phe Trp Gly Cys Leu Gly Phe Thr Ser Leu Tyr Arg His
 340 345 350

Leu Pro Ala Ser Leu Glu Trp Ile Leu Ser Leu Leu Ser Pro Phe Ala
 355 360 365
 Phe Met Leu Gly Met Ala Gln Leu Leu His Leu Asp Tyr Asp Leu Asn
 370 375 380
 Ser Asn Ala Phe Pro His Pro Ser Asp Gly Ser Asn Leu Ile Val Ala
 385 390 395 400
 Thr Asn Phe Met Leu Ala Phe Asp Thr Cys Leu Tyr Leu Ala Leu Ala
 405 410 415
 Ile Tyr Phe Glu Lys Ile Leu Pro Asn Glu Tyr Gly His Arg Arg Pro
 420 425 430
 Pro Leu Phe Phe Leu Lys Ser Ser Phe Trp Ser Gln Thr Gln Lys Thr
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 Asp His Val Ala Leu Glu Asp Glu Met Asp Ala Asp Pro Ser Phe His
 450 455 460
 Asp Ser Phe Glu Gln Ala Pro Pro Glu Phe Gln Gly Lys Glu Ala Ile
 465 470 475 480
 Arg Ile Arg Asn Val Thr Lys Glu Tyr Lys Gly Lys Pro Asp Lys Ile
 485 490 495
 Glu Ala Leu Lys Asp Leu Val Phe Asp Ile Tyr Glu Gly Gln Ile Thr
 500 505 510
 Ala Ile Leu Gly His Ser Gly Ala Gly Lys Ser Thr Leu Leu Asn Ile
 515 520 525
 Leu Ser Gly Leu Ser Val Pro Thr Lys Gly Ser Val Thr Ile Tyr Asn
 530 535 540
 Asn Lys Leu Ser Glu Met Ala Asp Leu Glu Asn Leu Ser Lys Leu Thr
 545 550 555 560
 Gly Val Cys Pro Gln Ser Asn Val Gln Phe Asp Phe Leu Thr Val Arg
 565 570 575
 Glu Asn Leu Arg Leu Phe Ala Lys Ile Lys Gly Ile Leu Pro Gln Glu
 580 585 590
 Val Asp Lys Glu Ile Phe Leu Leu Asp Glu Pro Thr Ala Gly Leu Asp
 595 600 605

Pro Phe Ser Arg His Gln Val Trp Asn Leu Leu Lys Glu Arg Lys Thr
610 615 620

Asp Arg Val Ile Leu Phe Ser Thr Gln Phe Met Asp Glu Ala Asp Ile
625 630 635 640

Leu Ala Asp Arg Lys Val Phe Leu Ser Gln Gly Lys Leu Lys Cys Ala
645 650 655

Gly Ser Ser Leu Phe Leu Lys Lys Lys Trp Gly Ile Gly Tyr His Leu
660 665 670

Ser Leu Gln Leu Asn Glu Ile Cys Val Glu Glu Asn Ile Thr Ser Leu
675 680 685

Val Lys Gln His Ile Pro Asp Ala Lys Leu Ser Ala Lys Ser Glu Gly
690 695 700

Lys Leu Ile Tyr Thr Leu Pro Leu Glu Arg Thr Asn Lys Phe Pro Glu
705 710 715 720

Leu Tyr Lys Asp Leu Asp Ser Tyr Pro Asp Leu Gly Ile Glu Asn Tyr
725 730 735

Gly Val Ser Met Thr Thr Leu Asn Glu Val Phe Leu Lys Leu Glu Gly
740 745 750

Lys Ser Thr Ile Asn Glu Ser Asp Ile Ala Ile Leu Gly Glu Val Gln
755 760 765

Ala Glu Lys Ala Asp Asp Thr Glu Arg Leu Val Glu Met Glu Gln Val
770 775 780

Leu Ser Ser Leu Asn Lys Met Arg Lys Thr Ile Gly Gly Val Ala Leu
785 790 795 800

Trp Arg Gln Gln Ile Cys Ala Ile Ala Arg Val Arg Leu Leu Lys Leu
805 810 815

Lys His Glu Arg Lys Ala Leu Leu Ala Leu Leu Leu Ile Leu Met Ala
820 825 830

Gly Phe Cys Pro Leu Leu Val Glu Tyr Thr Met Val Lys Ile Tyr Gln
835 840 845

Asn Ser Tyr Thr Trp Glu Leu Ser Pro His Leu Tyr Phe Leu Ala Pro
850 855 860

Gly Gln Gln Pro His Asp Pro Leu Thr Gln Leu Leu Ile Ile Asn Lys
 865 870 875 880
 Thr Gly Ala Ser Ile Asp Asp Phe Ile Gln Ser Val Glu His Gln Asn
 885 890 895
 Ile Ala Leu Glu Val Asp Ala Phe Gly Thr Arg Asn Gly Thr Asp Asp
 900 905 910
 Pro Ser Tyr Asn Gly Ala Ile Thr Val Cys Cys Asn Glu Lys Asn Tyr
 915 920 925
 Ser Phe Ser Leu Ala Cys Asn Ala Lys Arg Leu Asn Cys Phe Pro Val
 930 935 940
 Leu Met Asp Ile Val Ser Asn Gly Leu Leu Gly Met Val Lys Pro Ser
 945 950 955 960
 Val His Ile Arg Thr Glu Arg Ser Thr Phe Leu Glu Asn Gly Gln Asp
 965 970 975
 Asn Pro Ile Gly Phe Leu Ala Tyr Ile Met Phe Trp Leu Val Leu Thr
 980 985 990
 Ser Ser Cys Pro Pro Tyr Ile Ala Met Ser Ser Ile Asp Asp Tyr Lys
 995 1000 1005
 Asn Arg Ala Arg Ser Gln Leu Arg Ile Ser Gly Leu Ser Pro Ser
 1010 1015 1020
 Ala Tyr Trp Phe Gly Gln Ala Leu Val Asp Val Ser Leu Tyr Phe
 1025 1030 1035
 Leu Val Phe Val Phe Ile Tyr Leu Met Ser Tyr Ile Ser Asn Phe
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 Glu Asp Met Leu Leu Thr Ile Ile His Ile Ile Gln Ile Pro Cys
 1055 1060 1065
 Ala Val Gly Tyr Ser Phe Ser Leu Ile Phe Met Thr Tyr Val Ile
 1070 1075 1080
 Ser Phe Ile Phe Arg Lys Gly Arg Lys Asn Ser Gly Ile Trp Ser
 1085 1090 1095
 Phe Cys Phe Tyr Val Val Thr Val Phe Ser Val Ala Gly Phe Ala
 1100 1105 1110

Phe 1115	Ser	Ile	Phe	Glu	Ser	Asp 1120	Ile	Pro	Phe	Ile	Phe 1125	Thr	Phe	Leu
Ile 1130	Pro	Pro	Ala	Thr	Met	Ile 1135	Gly	Cys	Leu	Phe	Leu 1140	Ser	Ser	His
Leu 1145	Leu	Phe	Ser	Ser	Leu	Phe 1150	Ser	Glu	Glu	Arg	Met 1155	Asp	Val	Gln
Pro 1160	Phe	Leu	Val	Phe	Leu	Ile 1165	Pro	Phe	Leu	His	Phe 1170	Ile	Ile	Phe
Leu 1175	Phe	Thr	Leu	Arg	Cys	Leu 1180	Glu	Trp	Lys	Phe	Gly 1185	Lys	Lys	Ser
Met 1190	Arg	Lys	Asp	Pro	Phe	Phe 1195	Arg	Ile	Ser	Pro	Arg 1200	Ser	Ser	Asp
Val 1205	Cys	Gln	Asn	Pro	Glu	Glu 1210	Pro	Glu	Gly	Glu	Asp 1215	Glu	Asp	Val
Gln 1220	Met	Glu	Arg	Val	Arg	Thr 1225	Ala	Asn	Ala	Leu	Asn 1230	Ser	Thr	Asn
Phe 1235	Asp	Glu	Lys	Pro	Val	Ile 1240	Ile	Ala	Ser	Cys	Leu 1245	Arg	Lys	Glu
Tyr 1250	Ala	Gly	Lys	Arg	Lys	Gly 1255	Cys	Phe	Ser	Lys	Arg 1260	Lys	Asn	Lys
Ile 1265	Ala	Thr	Arg	Asn	Val	Ser 1270	Phe	Cys	Val	Arg	Lys 1275	Gly	Glu	Val
Leu 1280	Gly	Leu	Leu	Gly	His	Asn 1285	Gly	Ala	Gly	Lys	Ser 1290	Thr	Ser	Ile
Lys 1295	Val	Ile	Thr	Gly	Asp	Thr 1300	Lys	Pro	Thr	Ala	Gly 1305	Gln	Val	Leu
Leu 1310	Lys	Gly	Ser	Gly	Gly	Gly 1315	Asp	Ala	Leu	Glu	Phe 1320	Leu	Gly	Tyr
Cys 1325	Pro	Gln	Glu	Asn	Ala	Leu 1330	Trp	Pro	Asn	Leu	Thr 1335	Val	Arg	Gln
His 1340	Leu	Glu	Val	Tyr	Ala	Ala 1345	Val	Lys	Gly	Leu	Arg 1350	Lys	Gly	Asp

Ala Glu Val Ala Ile Thr Arg Leu Val Asp Ala Leu Lys Leu Gln
 1355 1360 1365
 Asp Gln Leu Lys Ser Pro Val Lys Thr Leu Ser Glu Gly Ile Lys
 1370 1375 1380
 Arg Lys Leu Cys Phe Val Leu Ser Ile Leu Gly Asn Pro Ser Val
 1385 1390 1395
 Val Leu Leu Asp Glu Pro Ser Thr Gly Met Asp Pro Glu Gly Gln
 1400 1405 1410
 Gln Gln Met Trp Gln Ala Ile Arg Ala Thr Phe Arg Asn Thr Glu
 1415 1420 1425
 Arg Gly Ala Leu Leu Thr Thr His Tyr Met Ala Glu Ala Glu Ala
 1430 1435 1440
 Val Cys Asp Arg Val Ala Ile Met Val Ser Gly Arg Leu Arg Cys
 1445 1450 1455
 Ile Gly Ser Ile Gln His Leu Lys Ser Lys Phe Gly Lys Asp Tyr
 1460 1465 1470
 Leu Leu Glu Met Lys Val Lys Asn Leu Ala Gln Val Glu Pro Leu
 1475 1480 1485
 His Ala Glu Ile Leu Arg Leu Phe Pro Gln Ala Ala Arg Gln Glu
 1490 1495 1500
 Arg Tyr Ser Ser Leu Met Val Tyr Lys Leu Pro Val Glu Asp Val
 1505 1510 1515
 Gln Pro Leu Ala Gln Ala Phe Phe Lys Leu Glu Lys Val Lys Gln
 1520 1525 1530
 Ser Phe Asp Leu Glu Glu Tyr Ser Leu Ser Gln Ser Thr Leu Glu
 1535 1540 1545
 Gln Val Phe Leu Glu Leu Ser Lys Glu Gln Glu Leu Gly Asp Phe
 1550 1555 1560
 Glu Glu Asp Phe Asp Pro Ser Val Lys Trp Lys Leu Leu Pro Gln
 1565 1570 1575
 Glu Glu Pro
 1580

<210> 137
<211> 422
<212> PRT
<213> Homo sapiens

<400> 137

Met Ser Ser Ser Cys Ser Gly Leu Ser Arg Val Leu Val Ala Val Ala
1 5 10 15
Thr Ala Leu Val Ser Ala Ser Ser Pro Cys Pro Gln Ala Trp Gly Pro
20 25 30
Pro Gly Val Gln Tyr Gly Gln Pro Gly Arg Ser Val Lys Leu Cys Cys
35 40 45
Pro Gly Val Thr Ala Gly Asp Pro Val Ser Trp Phe Arg Asp Gly Glu
50 55 60
Pro Lys Leu Leu Gln Gly Pro Asp Ser Gly Leu Gly His Glu Leu Val
65 70 75 80
Leu Ala Gln Ala Asp Ser Thr Asp Glu Gly Thr Tyr Ile Cys Gln Thr
85 90 95
Leu Asp Gly Ala Leu Gly Gly Thr Val Thr Leu Gln Leu Gly Tyr Pro
100 105 110
Pro Ala Arg Pro Val Val Ser Cys Gln Ala Ala Asp Tyr Glu Asn Phe
115 120 125
Ser Cys Thr Trp Ser Pro Ser Gln Ile Ser Gly Leu Pro Thr Arg Tyr
130 135 140
Leu Thr Ser Tyr Arg Lys Lys Thr Val Leu Gly Ala Asp Ser Gln Arg
145 150 155 160
Arg Ser Pro Ser Thr Gly Pro Trp Pro Cys Pro Gln Asp Pro Leu Gly
165 170 175
Ala Ala Arg Cys Val Val His Gly Ala Glu Phe Trp Ser Gln Tyr Arg
180 185 190
Ile Asn Val Thr Glu Val Asn Pro Leu Gly Ala Ser Thr Arg Leu Leu
195 200 205
Asp Val Ser Leu Gln Ser Ile Leu Arg Pro Asp Pro Pro Gln Gly Leu
210 215 220

Arg Val Glu Ser Val Pro Gly Tyr Pro Arg Arg Leu Arg Ala Ser Trp
225 230 235 240

Thr Tyr Pro Ala Ser Trp Pro Cys Gln Pro His Phe Leu Leu Lys Phe
245 250 255

Arg Leu Gln Tyr Arg Pro Ala Gln His Pro Ala Trp Ser Thr Val Glu
260 265 270

Pro Ala Gly Leu Glu Glu Val Ile Thr Asp Ala Val Ala Gly Leu Pro
275 280 285

His Ala Val Arg Val Ser Ala Arg Asp Phe Leu Asp Ala Gly Thr Trp
290 295 300

Ser Thr Trp Ser Pro Glu Ala Trp Gly Thr Pro Ser Thr Gly Thr Ile
305 310 315 320

Pro Lys Glu Ile Pro Ala Trp Gly Gln Leu His Thr Gln Pro Glu Val
325 330 335

Glu Pro Gln Val Asp Ser Pro Ala Pro Pro Arg Pro Ser Leu Gln Pro
340 345 350

His Pro Arg Leu Leu Asp His Arg Asp Ser Val Glu Gln Val Ala Val
355 360 365

Leu Ala Ser Leu Gly Ile Leu Ser Phe Leu Gly Leu Val Ala Gly Ala
370 375 380

Leu Ala Leu Gly Leu Trp Leu Arg Leu Arg Arg Gly Gly Lys Asp Gly
385 390 395 400

Ser Pro Lys Pro Gly Phe Leu Ala Ser Val Ile Pro Val Asp Arg Arg
405 410 415

Pro Gly Ala Pro Asn Leu
420

<210> 138
<211> 34
<212> PRT
<213> Homo sapiens

<400> 138

Ile Glu Pro Leu Ile Ser Ala Phe His Lys Val Glu Lys Phe Ala Lys
1 5 10 15

Glu Leu Gln Gly Lys Thr Asp Asn Gln Asn Asp Pro Glu Gly Asp Gln
Page 354

20

25

30

Glu Asn

<210> 139
 <211> 1181
 <212> PRT
 <213> Homo sapiens

<400> 139

Met Gly Pro Glu Arg Thr Gly Ala Ala Pro Leu Pro Leu Leu Val
 1 5 10 15

Leu Ala Leu Ser Gln Gly Ile Leu Asn Cys Cys Leu Ala Tyr Asn Val
 20 25 30

Gly Leu Pro Glu Ala Lys Ile Phe Ser Gly Pro Ser Ser Glu Gln Phe
 35 40 45

Gly Tyr Ala Val Gln Gln Phe Ile Asn Pro Lys Gly Asn Trp Leu Leu
 50 55 60

Val Gly Ser Pro Trp Ser Gly Phe Pro Glu Asn Arg Met Gly Asp Val
 65 70 75 80

Tyr Lys Cys Pro Val Asp Leu Ser Thr Ala Thr Cys Glu Lys Leu Asn
 85 90 95

Leu Gln Thr Ser Thr Ser Ile Pro Asn Val Thr Glu Met Lys Thr Asn
 100 105 110

Met Ser Leu Gly Leu Ile Leu Thr Arg Asn Met Gly Thr Gly Gly Phe
 115 120 125

Leu Thr Cys Gly Pro Leu Trp Ala Gln Gln Cys Gly Asn Gln Tyr Tyr
 130 135 140

Thr Thr Gly Val Cys Ser Asp Ile Ser Pro Asp Phe Gln Leu Ser Ala
 145 150 155 160

Ser Phe Ser Pro Ala Thr Gln Pro Cys Pro Ser Leu Ile Asp Val Val
 165 170 175

Val Val Cys Asp Glu Ser Asn Ser Ile Tyr Pro Trp Asp Ala Val Lys
 180 185 190

Asn Phe Leu Glu Lys Phe Val Gln Gly Leu Asp Ile Gly Pro Thr Lys
 195 200 205

Thr Gln Val Gly Leu Ile Gln Tyr Ala Asn Asn Pro Arg Val Val Phe
 210 215 220
 Asn Leu Asn Thr Tyr Lys Thr Lys Glu Glu Met Ile Val Ala Thr Ser
 225 230 235 240
 Gln Thr Ser Gln Tyr Gly Gly Asp Leu Thr Asn Thr Phe Gly Ala Ile
 245 250 255
 Gln Tyr Ala Arg Lys Tyr Ala Tyr Ser Ala Ala Ser Gly Gly Arg Arg
 260 265 270
 Ser Ala Thr Lys Val Met Val Val Val Thr Asp Gly Glu Ser His Asp
 275 280 285
 Gly Ser Met Leu Lys Ala Val Ile Asp Gln Cys Asn His Asp Asn Ile
 290 295 300
 Leu Arg Phe Gly Ile Ala Val Leu Gly Tyr Leu Asn Arg Asn Ala Leu
 305 310 315 320
 Asp Thr Lys Asn Leu Ile Lys Glu Ile Lys Ala Ile Ala Ser Ile Pro
 325 330 335
 Thr Glu Arg Tyr Phe Phe Asn Val Ser Asp Glu Ala Ala Leu Leu Glu
 340 345 350
 Lys Ala Gly Thr Leu Gly Glu Gln Ile Phe Ser Ile Glu Gly Thr Val
 355 360 365
 Gln Gly Gly Asp Asn Phe Gln Met Glu Met Ser Gln Val Gly Phe Ser
 370 375 380
 Ala Asp Tyr Ser Ser Gln Asn Asp Ile Leu Met Leu Gly Ala Val Gly
 385 390 395 400
 Ala Phe Gly Trp Ser Gly Thr Ile Val Gln Lys Thr Ser His Gly His
 405 410 415
 Leu Ile Phe Pro Lys Gln Ala Phe Asp Gln Ile Leu Gln Asp Arg Asn
 420 425 430
 His Ser Ser Tyr Leu Gly Tyr Ser Val Ala Ala Ile Ser Thr Gly Glu
 435 440 445
 Ser Thr His Phe Val Ala Gly Ala Pro Arg Ala Asn Tyr Thr Gly Gln
 450 455 460

Ile Val Leu Tyr Ser Val Asn Glu Asn Gly Asn Ile Thr Val Ile Gln
 465 470 475 480
 Ala His Arg Gly Asp Gln Ile Gly Ser Tyr Phe Gly Ser Val Leu Cys
 485 490 495
 Ser Val Asp Val Asp Lys Asp Thr Ile Thr Asp Val Leu Leu Val Gly
 500 505 510
 Ala Pro Met Tyr Met Ser Asp Leu Lys Lys Glu Glu Gly Arg Val Tyr
 515 520 525
 Leu Phe Thr Ile Lys Lys Gly Ile Leu Gly Gln His Gln Phe Leu Glu
 530 535 540
 Gly Pro Glu Gly Ile Glu Asn Thr Arg Phe Gly Ser Ala Ile Ala Ala
 545 550 555 560
 Leu Ser Asp Ile Asn Met Asp Gly Phe Asn Asp Val Ile Val Gly Ser
 565 570 575
 Pro Leu Glu Asn Gln Asn Ser Gly Ala Val Tyr Ile Tyr Asn Gly His
 580 585 590
 Gln Gly Thr Ile Arg Thr Lys Tyr Ser Gln Lys Ile Leu Gly Ser Asp
 595 600 605
 Gly Ala Phe Arg Ser His Leu Gln Tyr Phe Gly Arg Ser Leu Asp Gly
 610 615 620
 Tyr Gly Asp Leu Asn Gly Asp Ser Ile Thr Asp Val Ser Ile Gly Ala
 625 630 635 640
 Phe Gly Gln Val Val Gln Leu Trp Ser Gln Ser Ile Ala Asp Val Ala
 645 650 655
 Ile Glu Ala Ser Phe Thr Pro Glu Lys Ile Thr Leu Val Asn Lys Asn
 660 665 670
 Ala Gln Ile Ile Leu Lys Leu Cys Phe Ser Ala Lys Phe Arg Pro Thr
 675 680 685
 Lys Gln Asn Asn Gln Val Ala Ile Val Tyr Asn Ile Thr Leu Asp Ala
 690 695 700
 Asp Gly Phe Ser Ser Arg Val Thr Ser Arg Gly Leu Phe Lys Glu Asn
 705 710 715 720

Asn Glu Arg Cys Leu Gln Lys Asn Met Val Val Asn Gln Ala Gln Ser
 725 730 735
 Cys Pro Glu His Ile Ile Tyr Ile Gln Glu Pro Ser Asp Val Val Asn
 740 745 750
 Ser Leu Asp Leu Arg Val Asp Ile Ser Leu Glu Asn Pro Gly Thr Ser
 755 760 765
 Pro Ala Leu Glu Ala Tyr Ser Glu Thr Ala Lys Val Phe Ser Ile Pro
 770 775 780
 Phe His Lys Asp Cys Gly Glu Asp Gly Leu Cys Ile Ser Asp Leu Val
 785 790 795 800
 Leu Asp Val Arg Gln Ile Pro Ala Ala Gln Glu Gln Pro Phe Ile Val
 805 810 815
 Ser Asn Gln Asn Lys Arg Leu Thr Phe Ser Val Thr Leu Lys Asn Lys
 820 825 830
 Arg Glu Ser Ala Tyr Asn Thr Gly Ile Val Val Asp Phe Ser Glu Asn
 835 840 845
 Leu Phe Phe Ala Ser Phe Ser Leu Pro Val Asp Gly Thr Glu Val Thr
 850 855 860
 Cys Gln Val Ala Ala Ser Gln Lys Ser Val Ala Cys Asp Val Gly Tyr
 865 870 875 880
 Pro Ala Leu Lys Arg Glu Gln Gln Val Thr Phe Thr Ile Asn Phe Asp
 885 890 895
 Phe Asn Leu Gln Asn Leu Gln Asn Gln Ala Ser Leu Ser Phe Gln Ala
 900 905 910
 Leu Ser Glu Ser Gln Glu Glu Asn Lys Ala Asp Asn Leu Val Asn Leu
 915 920 925
 Lys Ile Pro Leu Leu Tyr Asp Ala Glu Ile His Leu Thr Arg Ser Thr
 930 935 940
 Asn Ile Asn Phe Tyr Glu Ile Ser Ser Asp Gly Asn Val Pro Ser Ile
 945 950 955 960
 Val His Ser Phe Glu Asp Val Gly Pro Lys Phe Ile Phe Ser Leu Lys
 965 970 975

Val Thr Thr Gly Ser Val Pro Val Ser Met Ala Thr Val Ile Ile His
 980 985 990

Ile Pro Gln Tyr Thr Lys Glu Lys Asn Pro Leu Met Tyr Leu Thr Gly
 995 1000 1005

Val Gln Thr Asp Lys Ala Gly Asp Ile Ser Cys Asn Ala Asp Ile
 1010 1015 1020

Asn Pro Leu Lys Ile Gly Gln Thr Ser Ser Ser Val Ser Phe Lys
 1025 1030 1035

Ser Glu Asn Phe Arg His Thr Lys Glu Leu Asn Cys Arg Thr Ala
 1040 1045 1050

Ser Cys Ser Asn Val Thr Cys Trp Leu Lys Asp Val His Met Lys
 1055 1060 1065

Gly Glu Tyr Phe Val Asn Val Thr Thr Arg Ile Trp Asn Gly Thr
 1070 1075 1080

Phe Ala Ser Ser Thr Phe Gln Thr Val Gln Leu Thr Ala Ala Ala
 1085 1090 1095

Glu Ile Asn Thr Tyr Asn Pro Glu Ile Tyr Val Ile Glu Asp Asn
 1100 1105 1110

Thr Val Thr Ile Pro Leu Met Ile Met Lys Pro Asp Glu Lys Ala
 1115 1120 1125

Glu Val Pro Thr Gly Val Ile Ile Gly Ser Ile Ile Ala Gly Ile
 1130 1135 1140

Leu Leu Leu Leu Ala Leu Val Ala Ile Leu Trp Lys Leu Gly Phe
 1145 1150 1155

Phe Lys Arg Lys Tyr Glu Lys Met Thr Lys Asn Pro Asp Glu Ile
 1160 1165 1170

Asp Glu Thr Thr Glu Leu Ser Ser
 1175 1180

<210> 140
 <211> 245
 <212> PRT
 <213> Homo sapiens

<400> 140

Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln Ala
 1 5 10 15
 Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser Pro Ser
 20 25 30
 Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val Phe Ser Arg
 35 40 45
 Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg Arg Pro Glu Pro
 50 55 60
 Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser Arg Gln Gly Tyr His
 65 70 75 80
 Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp Gly Thr Lys Asp Glu Asp
 85 90 95
 Ser Thr Tyr Thr Leu Phe Asn Leu Ile Pro Val Gly Leu Arg Val Val
 100 105 110
 Ala Ile Gln Gly Val Gln Thr Lys Leu Tyr Leu Ala Met Asn Ser Glu
 115 120 125
 Gly Tyr Leu Tyr Thr Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys
 130 135 140
 Glu Ser Val Phe Glu Asn Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr
 145 150 155 160
 Arg Gln Gln Gln Ser Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu
 165 170 175
 Gly Glu Ile Met Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala
 180 185 190
 His Phe Leu Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser
 195 200 205
 Leu His Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr
 210 215 220
 Lys Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser
 225 230 235 240
 His Asn Glu Ser Thr
 245

<210> 141
 <211> 202
 <212> PRT
 <213> Homo sapiens

<400> 141

Met Glu Leu Trp Gly Ala Tyr Leu Leu Leu Cys Leu Phe Ser Leu Leu
 1 5 10 15

Thr Gln Val Thr Thr Glu Pro Pro Thr Gln Lys Pro Lys Lys Ile Val
 20 25 30

Asn Ala Lys Lys Asp Val Val Asn Thr Lys Met Phe Glu Glu Leu Lys
 35 40 45

Ser Arg Leu Asp Thr Leu Ala Gln Glu Val Ala Leu Leu Lys Glu Gln
 50 55 60

Gln Ala Leu Gln Thr Val Cys Leu Lys Gly Thr Lys Val His Met Lys
 65 70 75 80

Cys Phe Leu Ala Phe Thr Gln Thr Lys Thr Phe His Glu Ala Ser Glu
 85 90 95

Asp Cys Ile Ser Arg Gly Gly Thr Leu Ser Thr Pro Gln Thr Gly Ser
 100 105 110

Glu Asn Asp Ala Leu Tyr Glu Tyr Leu Arg Gln Ser Val Gly Asn Glu
 115 120 125

Ala Glu Ile Trp Leu Gly Leu Asn Asp Met Ala Ala Glu Gly Thr Trp
 130 135 140

Val Asp Met Thr Gly Ala Arg Ile Ala Tyr Lys Asn Trp Glu Thr Glu
 145 150 155 160

Ile Thr Ala Gln Pro Asp Gly Gly Lys Thr Glu Asn Cys Ala Val Leu
 165 170 175

Ser Gly Ala Ala Asn Gly Lys Trp Phe Asp Lys Arg Cys Arg Asp Gln
 180 185 190

Leu Pro Tyr Ile Cys Gln Phe Gly Ile Val
 195 200

<210> 142
 <211> 638
 <212> PRT
 <213> Homo sapiens

<400> 142

Met Asp Leu Trp Gln Leu Leu Leu Thr Leu Ala Leu Ala Gly Ser Ser
1 5 10 15

Asp Ala Phe Ser Gly Ser Glu Ala Thr Ala Ala Ile Leu Ser Arg Ala
20 25 30

Pro Trp Ser Leu Gln Ser Val Asn Pro Gly Leu Lys Thr Asn Ser Ser
35 40 45

Lys Glu Pro Lys Phe Thr Lys Cys Arg Ser Pro Glu Arg Glu Thr Phe
50 55 60

Ser Cys His Trp Thr Asp Glu Val His His Gly Thr Lys Asn Leu Gly
65 70 75 80

Pro Ile Gln Leu Phe Tyr Thr Arg Arg Asn Thr Gln Glu Trp Thr Gln
85 90 95

Glu Trp Lys Glu Cys Pro Asp Tyr Val Ser Ala Gly Glu Asn Ser Cys
100 105 110

Tyr Phe Asn Ser Ser Phe Thr Ser Ile Trp Ile Pro Tyr Cys Ile Lys
115 120 125

Leu Thr Ser Asn Gly Gly Thr Val Asp Glu Lys Cys Phe Ser Val Asp
130 135 140

Glu Ile Val Gln Pro Asp Pro Pro Ile Ala Leu Asn Trp Thr Leu Leu
145 150 155 160

Asn Val Ser Leu Thr Gly Ile His Ala Asp Ile Gln Val Arg Trp Glu
165 170 175

Ala Pro Arg Asn Ala Asp Ile Gln Lys Gly Trp Met Val Leu Glu Tyr
180 185 190

Glu Leu Gln Tyr Lys Glu Val Asn Glu Thr Lys Trp Lys Met Met Asp
195 200 205

Pro Ile Leu Thr Thr Ser Val Pro Val Tyr Ser Leu Lys Val Asp Lys
210 215 220

Glu Tyr Glu Val Arg Val Arg Ser Lys Gln Arg Asn Ser Gly Asn Tyr
225 230 235 240

Gly Glu Phe Ser Glu Val Leu Tyr Val Thr Leu Pro Gln Met Ser Gln
Page 362

245

250

255

Phe Thr Cys Glu Glu Asp Phe Tyr Phe Pro Trp Leu Leu Ile Ile Ile
 260 265 270

Phe Gly Ile Phe Gly Leu Thr Val Met Leu Phe Val Phe Leu Phe Ser
 275 280 285

Lys Gln Gln Arg Ile Lys Met Leu Ile Leu Pro Pro Val Pro Val Pro
 290 295 300

Lys Ile Lys Gly Ile Asp Pro Asp Leu Leu Lys Glu Gly Lys Leu Glu
 305 310 315 320

Glu Val Asn Thr Ile Leu Ala Ile His Asp Ser Tyr Lys Pro Glu Phe
 325 330 335

His Ser Asp Asp Ser Trp Val Glu Phe Ile Glu Leu Asp Ile Asp Glu
 340 345 350

Pro Asp Glu Lys Thr Glu Glu Ser Asp Thr Asp Arg Leu Leu Ser Ser
 355 360 365

Asp His Glu Lys Ser His Ser Asn Leu Gly Val Lys Asp Gly Asp Ser
 370 375 380

Gly Arg Thr Ser Cys Cys Glu Pro Asp Ile Leu Glu Thr Asp Phe Asn
 385 390 395 400

Ala Asn Asp Ile His Glu Gly Thr Ser Glu Val Ala Gln Pro Gln Arg
 405 410 415

Leu Lys Gly Glu Ala Asp Leu Leu Cys Leu Asp Gln Lys Asn Gln Asn
 420 425 430

Asn Ser Pro Tyr His Asp Ala Cys Pro Ala Thr Gln Gln Pro Ser Val
 435 440 445

Ile Gln Ala Glu Lys Asn Lys Pro Gln Pro Leu Pro Thr Glu Gly Ala
 450 455 460

Glu Ser Thr His Gln Ala Ala His Ile Gln Leu Ser Asn Pro Ser Ser
 465 470 475 480

Leu Ser Asn Ile Asp Phe Tyr Ala Gln Val Ser Asp Ile Thr Pro Ala
 485 490 495

Gly Ser Val Val Leu Ser Pro Gly Gln Lys Asn Lys Ala Gly Met Ser
 Page 363

500

505

510

Gln Cys Asp Met His Pro Glu Met Val Ser Leu Cys Gln Glu Asn Phe
 515 520 525

Leu Met Asp Asn Ala Tyr Phe Cys Glu Ala Asp Ala Lys Lys Cys Ile
 530 535 540

Pro Val Ala Pro His Ile Lys Val Glu Ser His Ile Gln Pro Ser Leu
 545 550 555 560

Asn Gln Glu Asp Ile Tyr Ile Thr Thr Glu Ser Leu Thr Thr Ala Ala
 565 570 575

Gly Arg Pro Gly Thr Gly Glu His Val Pro Gly Ser Glu Met Pro Val
 580 585 590

Pro Asp Tyr Thr Ser Ile His Ile Val Gln Ser Pro Gln Gly Leu Ile
 595 600 605

Leu Asn Ala Thr Ala Leu Pro Leu Pro Asp Lys Glu Phe Leu Ser Ser
 610 615 620

Cys Gly Tyr Val Ser Thr Asp Gln Leu Asn Lys Ile Met Pro
 625 630 635

<210> 143
 <211> 465
 <212> PRT
 <213> Homo sapiens

<400> 143

Met Ala Ser Gln Leu Thr Gln Arg Gly Ala Leu Phe Leu Leu Phe Phe
 1 5 10 15

Leu Thr Pro Ala Val Thr Pro Thr Trp Tyr Ala Gly Ser Gly Tyr Tyr
 20 25 30

Pro Asp Glu Ser Tyr Asn Glu Val Tyr Ala Glu Glu Val Pro Gln Ala
 35 40 45

Pro Ala Leu Asp Tyr Arg Val Pro Arg Trp Cys Tyr Thr Leu Asn Ile
 50 55 60

Gln Asp Gly Glu Ala Thr Cys Tyr Ser Pro Lys Gly Gly Asn Tyr His
 65 70 75 80

Ser Ser Leu Gly Thr Arg Cys Glu Leu Ser Cys Asp Arg Gly Phe Arg
 85 90 95

Leu Ile Gly Arg Arg Ser Val Gln Cys Leu Pro Ser Arg Arg Trp Ser
100 105 110

Gly Thr Ala Tyr Cys Arg Gln Met Arg Cys His Ala Leu Pro Phe Ile
115 120 125

Thr Ser Gly Thr Tyr Thr Cys Thr Asn Gly Val Leu Leu Asp Ser Arg
130 135 140

Cys Asp Tyr Ser Cys Ser Ser Gly Tyr His Leu Glu Gly Asp Arg Ser
145 150 155 160

Arg Ile Cys Met Glu Asp Gly Arg Trp Ser Gly Gly Glu Pro Val Cys
165 170 175

Val Asp Ile Asp Pro Pro Lys Ile Arg Cys Pro His Ser Arg Glu Lys
180 185 190

Met Ala Glu Pro Glu Lys Leu Thr Ala Arg Val Tyr Trp Asp Pro Pro
195 200 205

Leu Val Lys Asp Ser Ala Asp Gly Thr Ile Thr Arg Val Thr Leu Arg
210 215 220

Gly Pro Glu Pro Gly Ser His Phe Pro Glu Gly Glu His Val Ile Arg
225 230 235 240

Tyr Thr Ala Tyr Asp Arg Ala Tyr Asn Arg Ala Ser Cys Lys Phe Ile
245 250 255

Val Lys Val Gln Val Arg Arg Cys Pro Thr Leu Lys Pro Pro Gln His
260 265 270

Gly Tyr Leu Thr Cys Thr Ser Ala Gly Asp Asn Tyr Gly Ala Ser Cys
275 280 285

Glu Tyr His Cys Asp Gly Gly Tyr Asp Arg Gln Gly Thr Pro Ser Arg
290 295 300

Val Cys Gln Ser Ser Arg Gln Trp Ser Gly Ser Pro Pro Ile Cys Ala
305 310 315 320

Pro Met Lys Ile Asn Val Asn Val Asn Ser Ala Ala Gly Leu Leu Asp
325 330 335

Gln Phe Tyr Glu Lys Gln Arg Leu Leu Ile Ile Ser Ala Pro Asp Pro
340 345 350

Ser Asn Arg Tyr Tyr Lys Met Gln Ile Ser Met Leu Gln Gln Ser Thr
355 360 365

Cys Gly Leu Asp Leu Arg His Val Thr Ile Ile Glu Leu Val Gly Gln
370 375 380

Pro Pro Gln Glu Val Gly Arg Ile Arg Glu Gln Gln Leu Ser Ala Asn
385 390 395 400

Ile Ile Glu Glu Leu Arg Gln Phe Gln Arg Leu Thr Arg Ser Tyr Phe
405 410 415

Asn Met Val Leu Ile Asp Lys Gln Gly Ile Asp Arg Asp Arg Tyr Met
420 425 430

Glu Pro Val Thr Pro Glu Glu Ile Phe Thr Phe Ile Asp Asp Tyr Leu
435 440 445

Leu Ser Asn Gln Glu Leu Thr Gln Arg Arg Glu Gln Arg Asp Ile Cys
450 455 460

Glu
465

<210> 144
<211> 4870
<212> PRT
<213> Homo sapiens

<400> 144

Met Ala Glu Gly Gly Glu Gly Gly Glu Asp Glu Ile Gln Phe Leu Arg
1 5 10 15

Thr Glu Asp Glu Val Val Leu Gln Cys Ile Ala Thr Ile His Lys Glu
20 25 30

Gln Arg Lys Phe Cys Leu Ala Ala Glu Gly Leu Gly Asn Arg Leu Cys
35 40 45

Phe Leu Glu Pro Thr Ser Glu Ala Lys Tyr Ile Pro Pro Asp Leu Cys
50 55 60

Val Cys Asn Phe Val Leu Glu Gln Ser Leu Ser Val Arg Ala Leu Gln
65 70 75 80

Glu Met Leu Ala Asn Thr Gly Glu Asn Gly Gly Glu Gly Ala Ala Gln
85 90 95

Gly Gly Gly His Arg Thr Leu Leu Tyr Gly His Ala Val Leu Leu Arg
 100: 105 110

His Ser Phe Ser Gly Met Tyr Leu Thr Cys Leu Thr Thr Ser Arg Ser
 115 120 125

Gln Thr Asp Lys Leu Ala Phe Asp Val Gly Leu Arg Glu His Ala Thr
 130 135 140

Gly Glu Ala Cys Trp Trp Thr Ile His Pro Ala Ser Lys Gln Arg Ser
 145 150 155 160

Glu Gly Glu Lys Val Arg Ile Gly Asp Asp Leu Ile Leu Val Ser Val
 165 170 175

Ser Ser Glu Arg Tyr Leu His Leu Ser Val Ser Asn Gly Asn Ile Gln
 180 185 190

Val Asp Ala Ser Phe Met Gln Thr Leu Trp Asn Val His Pro Thr Cys
 195 200 205

Ser Gly Ser Ser Ile Glu Glu Gly Tyr Leu Leu Gly Gly His Val Val
 210 215 220

Arg Leu Phe His Gly His Asp Glu Cys Leu Thr Ile Pro Ser Thr Asp
 225 230 235 240

Gln Asn Asp Ser Gln His Arg Arg Ile Phe Tyr Glu Ala Gly Gly Ala
 245 250 255

Gly Thr Arg Ala Ser Ser Leu Trp Arg Val Glu Pro Leu Arg Ile Ser
 260 265 270

Trp Ser Gly Ser Asn Ile Arg Trp Gly Gln Ala Phe Arg Leu Arg His
 275 280 285

Leu Thr Thr Gly His Tyr Leu Ala Leu Thr Glu Asp Gln Gly Leu Ile
 290 295 300

Leu Gln Asp Arg Ala Lys Ser Asp Thr Lys Ser Thr Ala Phe Ser Phe
 305 310 315 320

Arg Ala Ser Lys Glu Leu Lys Glu Lys Leu Asp Ser Ser His Lys Arg
 325 330 335

Asp Ile Glu Gly Met Gly Val Pro Glu Ile Lys Tyr Gly Asp Ser Val
 340 345 350

Cys Phe Val Gln His Ile Ala Ser Gly Leu Trp Val Thr Tyr Lys Ala
 355 360 365
 Gln Asp Ala Lys Thr Ser Arg Leu Gly Pro Leu Lys Arg Lys Val Ile
 370 375 380
 Leu His Gln Glu Gly His Met Asp Asp Gly Leu Thr Leu Gln Arg Cys
 385 390 395 400
 Gln Arg Glu Glu Ser Gln Ala Ala Arg Ile Ile Arg Asn Thr Thr Ala
 405 410 415
 Leu Phe Ser Gln Phe Val Ser Gly Asn Asn Arg Thr Ala Ala Pro Ile
 420 425 430
 Thr Leu Pro Ile Glu Glu Val Leu Gln Thr Leu Gln Asp Leu Ile Ala
 435 440 445
 Tyr Phe Gln Pro Pro Glu Glu Glu Met Arg His Glu Asp Lys Gln Asn
 450 455 460
 Lys Leu Arg Ser Leu Lys Asn Arg Gln Asn Leu Phe Lys Glu Glu Gly
 465 470 475 480
 Met Leu Ala Leu Val Leu Asn Cys Ile Asp Arg Leu Asn Ile Tyr Asn
 485 490 495
 Ser Val Ala His Phe Ala Gly Ile Ala Arg Glu Glu Ser Gly Met Ala
 500 505 510
 Trp Lys Glu Ile Leu Asn Leu Leu Tyr Lys Leu Leu Ala Ala Leu Ile
 515 520 525
 Arg Gly Asn Arg Asn Asn Cys Ala Gln Phe Ser Asn Asn Leu Asp Trp
 530 535 540
 Leu Ile Ser Lys Leu Asp Arg Leu Glu Ser Ser Ser Gly Ile Leu Glu
 545 550 555 560
 Val Leu His Cys Ile Leu Thr Glu Ser Pro Glu Ala Leu Asn Leu Ile
 565 570 575
 Ala Glu Gly His Ile Lys Ser Ile Ile Ser Leu Leu Asp Lys His Gly
 580 585 590
 Arg Asn His Lys Val Leu Asp Ile Leu Cys Ser Leu Cys Leu Cys Asn
 595 600 605

Gly Val Ala Val Arg Ala Asn Gln Asn Leu Ile Cys Asp Asn Leu Leu
 610 615 620
 Pro Arg Arg Asn Leu Leu Leu Gln Thr Arg Leu Ile Asn Asp Val Thr
 625 630 635 640
 Ser Ile Arg Pro Asn Ile Phe Leu Gly Val Ala Glu Gly Ser Ala Gln
 645 650 655
 Tyr Lys Lys Trp Tyr Phe Glu Leu Ile Ile Asp Gln Val Asp Pro Phe
 660 665 670
 Leu Thr Ala Glu Pro Thr His Leu Arg Val Gly Trp Ala Ser Ser Ser
 675 680 685
 Gly Tyr Ala Pro Cys Pro Gly Gly Gly Glu Gly Trp Gly Gly Asn Gly
 690 695 700
 Val Gly Asp Asp Leu Tyr Ser Tyr Gly Phe Asp Gly Leu His Leu Trp
 705 710 715 720
 Ser Gly Arg Ile Pro Arg Ala Val Ala Ser Val Asn Gln His Leu Leu
 725 730 735
 Arg Ser Asp Asp Val Val Ser Cys Cys Leu Asp Leu Gly Val Pro Ser
 740 745 750
 Ile Ser Phe Arg Ile Asn Gly Gln Pro Val Gln Gly Met Phe Glu Asn
 755 760 765
 Phe Asn Thr Asp Gly Leu Phe Phe Pro Val Met Ser Phe Ser Ala Gly
 770 775 780
 Val Lys Val Arg Phe Leu Met Gly Gly Arg His Gly Glu Phe Lys Phe
 785 790 795 800
 Leu Pro Pro Ser Gly Tyr Ala Pro Cys Tyr Glu Ala Leu Leu Pro Lys
 805 810 815
 Glu Lys Met Arg Leu Glu Pro Val Lys Glu Tyr Lys Arg Asp Ala Asp
 820 825 830
 Gly Ile Arg Asp Leu Leu Gly Thr Thr Gln Phe Leu Ser Gln Ala Ser
 835 840 845
 Phe Ile Pro Cys Pro Val Asp Thr Ser Gln Val Ile Leu Pro Pro His
 850 855 860

Leu Glu Lys Ile Arg Asp Arg Leu Ala Glu Asn Ile His Glu Leu Trp
 865 870 875 880

Gly Met Asn Lys Ile Glu Leu Gly Trp Thr Phe Gly Lys Ile Arg Asp
 885 890 895

Asp Asn Lys Arg Gln His Pro Cys Leu Val Glu Phe Ser Lys Leu Pro
 900 905 910

Glu Thr Glu Lys Asn Tyr Asn Leu Gln Met Ser Thr Glu Thr Leu Lys
 915 920 925

Thr Leu Leu Ala Leu Gly Cys His Ile Ala His Val Asn Pro Ala Ala
 930 935 940

Glu Glu Asp Leu Lys Lys Val Lys Leu Pro Lys Asn Tyr Met Met Ser
 945 950 955 960

Asn Gly Tyr Lys Pro Ala Pro Leu Asp Leu Ser Asp Val Lys Leu Leu
 965 970 975

Pro Pro Gln Glu Ile Leu Val Asp Lys Leu Ala Glu Asn Ala His Asn
 980 985 990

Val Trp Ala Lys Asp Arg Ile Lys Gln Gly Trp Thr Tyr Gly Ile Gln
 995 1000 1005

Gln Asp Leu Lys Asn Lys Arg Asn Pro Arg Leu Val Pro Tyr Ala
 1010 1015 1020

Leu Leu Asp Glu Arg Thr Lys Lys Ser Asn Arg Asp Ser Leu Arg
 1025 1030 1035

Glu Ala Val Arg Thr Phe Val Gly Tyr Gly Tyr Asn Ile Glu Pro
 1040 1045 1050

Ser Asp Gln Glu Leu Ala Asp Ser Ala Val Glu Lys Val Ser Ile
 1055 1060 1065

Asp Lys Ile Arg Phe Phe Arg Val Glu Arg Ser Tyr Ala Val Arg
 1070 1075 1080

Ser Gly Lys Trp Tyr Phe Glu Phe Glu Val Val Thr Gly Gly Asp
 1085 1090 1095

Met Arg Val Gly Trp Ala Arg Pro Gly Cys Arg Pro Asp Val Glu
 1100 1105 1110

Leu Gly Ala Asp Asp Gln Ala Phe Val Phe Glu Gly Asn Arg Gly
 1115 1120 1125
 Gln Arg Trp His Gln Gly Ser Gly Tyr Phe Gly Arg Thr Trp Gln
 1130 1135 1140
 Pro Gly Asp Val Val Gly Cys Met Ile Asn Leu Asp Asp Ala Ser
 1145 1150 1155
 Met Ile Phe Thr Leu Asn Gly Glu Leu Leu Ile Thr Asn Lys Gly
 1160 1165 1170
 Ser Glu Leu Ala Phe Ala Asp Tyr Glu Ile Glu Asn Gly Phe Val
 1175 1180 1185
 Pro Ile Cys Cys Leu Gly Leu Ser Gln Ile Gly Arg Met Asn Leu
 1190 1195 1200
 Gly Thr Asp Ala Ser Thr Phe Lys Phe Tyr Thr Met Cys Gly Leu
 1205 1210 1215
 Gln Glu Gly Phe Glu Pro Phe Ala Val Asn Met Asn Arg Asp Val
 1220 1225 1230
 Ala Met Trp Phe Ser Lys Arg Leu Pro Thr Phe Val Asn Val Pro
 1235 1240 1245
 Lys Asp His Pro His Ile Glu Val Met Arg Ile Asp Gly Thr Met
 1250 1255 1260
 Asp Ser Pro Pro Cys Leu Lys Val Thr His Lys Thr Phe Gly Thr
 1265 1270 1275
 Gln Asn Ser Asn Ala Asp Met Ile Tyr Cys Arg Leu Ser Met Pro
 1280 1285 1290
 Val Glu Cys His Ser Ser Phe Ser His Ser Pro Cys Leu Asp Ser
 1295 1300 1305
 Glu Ala Phe Gln Lys Arg Lys Gln Met Gln Glu Ile Leu Ser His
 1310 1315 1320
 Thr Thr Thr Gln Cys Tyr Tyr Ala Ile Arg Ile Phe Ala Gly Gln
 1325 1330 1335
 Asp Pro Ser Cys Val Trp Val Gly Trp Val Thr Pro Asp Tyr His
 1340 1345 1350

Leu	Tyr 1355	Ser	Glu	Lys	Phe	Asp 1360	Leu	Asn	Lys	Asn	Cys 1365	Thr	Val	Thr
Val	Thr 1370	Leu	Gly	Asp	Glu	Arg 1375	Gly	Arg	Val	His	Glu 1380	Ser	Val	Lys
Arg	Ser 1385	Asn	Cys	Tyr	Met	Val 1390	Trp	Gly	Gly	Asp	Ile 1395	Val	Ala	Ser
Ser	Gln 1400	Arg	Ser	Asn	Arg	Ser 1405	Asn	Val	Asp	Leu	Glu 1410	Ile	Gly	Cys
Leu	Val 1415	Asp	Leu	Ala	Met	Gly 1420	Met	Leu	Ser	Phe	Ser 1425	Ala	Asn	Gly
Lys	Glu 1430	Leu	Gly	Thr	Cys	Tyr 1435	Gln	Val	Glu	Pro	Asn 1440	Thr	Lys	Val
Phe	Pro 1445	Ala	Val	Phe	Leu	Gln 1450	Pro	Thr	Ser	Thr	Ser 1455	Leu	Phe	Gln
Phe	Glu 1460	Leu	Gly	Lys	Leu	Lys 1465	Asn	Ala	Met	Pro	Leu 1470	Ser	Ala	Ala
Ile	Phe 1475	Arg	Ser	Glu	Glu	Lys 1480	Asn	Pro	Val	Pro	Gln 1485	Cys	Pro	Pro
Arg	Leu 1490	Asp	Val	Gln	Thr	Ile 1495	Gln	Pro	Val	Leu	Trp 1500	Ser	Arg	Met
Pro	Asn 1505	Ser	Phe	Leu	Lys	Val 1510	Glu	Thr	Glu	Arg	Val 1515	Ser	Glu	Arg
His	Gly 1520	Trp	Val	Val	Gln	Cys 1525	Leu	Glu	Pro	Leu	Gln 1530	Met	Met	Ala
Leu	His 1535	Ile	Pro	Glu	Glu	Asn 1540	Arg	Cys	Val	Asp	Ile 1545	Leu	Glu	Leu
Cys	Glu 1550	Gln	Glu	Asp	Leu	Met 1555	Arg	Phe	His	Tyr	His 1560	Thr	Leu	Arg
Leu	Tyr 1565	Ser	Ala	Val	Cys	Ala 1570	Leu	Gly	Asn	Ser	Arg 1575	Val	Ala	Tyr
Ala	Leu 1580	Cys	Ser	His	Val	Asp 1585	Leu	Ser	Gln	Leu	Phe 1590	Tyr	Ala	Ile

Asp	Asn	Lys	Tyr	Leu	Pro	Gly	Leu	Leu	Arg	Ser	Gly	Phe	Tyr	Asp
	1595					1600					1605			
Leu	Leu	Ile	Ser	Ile	His	Leu	Ala	Ser	Ala	Lys	Glu	Arg	Lys	Leu
	1610					1615					1620			
Met	Met	Lys	Asn	Glu	Tyr	Ile	Ile	Pro	Ile	Thr	Ser	Thr	Thr	Arg
	1625					1630					1635			
Asn	Ile	Cys	Leu	Phe	Pro	Asp	Glu	Ser	Lys	Arg	His	Gly	Leu	Pro
	1640					1645					1650			
Gly	Val	Gly	Leu	Arg	Thr	Cys	Leu	Lys	Pro	Gly	Phe	Arg	Phe	Ser
	1655					1660					1665			
Thr	Pro	Cys	Phe	Val	Val	Thr	Gly	Glu	Asp	His	Gln	Lys	Gln	Ser
	1670					1675					1680			
Pro	Glu	Ile	Pro	Leu	Glu	Ser	Leu	Arg	Thr	Lys	Ala	Leu	Ser	Met
	1685					1690					1695			
Leu	Thr	Glu	Ala	Val	Gln	Cys	Ser	Gly	Ala	His	Ile	Arg	Asp	Pro
	1700					1705					1710			
Val	Gly	Gly	Ser	Val	Glu	Phe	Gln	Phe	Val	Pro	Val	Leu	Lys	Leu
	1715					1720					1725			
Ile	Gly	Thr	Leu	Leu	Val	Met	Gly	Val	Phe	Asp	Asp	Asp	Asp	Val
	1730					1735					1740			
Arg	Gln	Ile	Leu	Leu	Leu	Ile	Asp	Pro	Ser	Val	Phe	Gly	Glu	His
	1745					1750					1755			
Ser	Ala	Gly	Thr	Glu	Glu	Gly	Ala	Glu	Lys	Glu	Glu	Val	Thr	Gln
	1760					1765					1770			
Val	Glu	Glu	Lys	Ala	Val	Glu	Ala	Gly	Glu	Lys	Ala	Gly	Lys	Glu
	1775					1780					1785			
Ala	Pro	Val	Lys	Gly	Leu	Leu	Gln	Thr	Arg	Leu	Pro	Glu	Ser	Val
	1790					1795					1800			
Lys	Leu	Gln	Met	Cys	Glu	Leu	Leu	Ser	Tyr	Leu	Cys	Asp	Cys	Glu
	1805					1810					1815			
Leu	Gln	His	Arg	Val	Glu	Ala	Ile	Val	Ala	Phe	Gly	Asp	Ile	Tyr
	1820					1825					1830			

Val	Ser	Lys	Leu	Gln	Ala	Asn	Gln	Lys	Phe	Arg	Tyr	Asn	Glu	Leu
	1835					1840					1845			
Met	Gln	Ala	Leu	Asn	Met	Ser	Ala	Ala	Leu	Thr	Ala	Arg	Lys	Thr
	1850					1855					1860			
Lys	Glu	Phe	Arg	Ser	Pro	Pro	Gln	Glu	Gln	Ile	Asn	Met	Leu	Leu
	1865					1870					1875			
Asn	Phe	Gln	Leu	Gly	Glu	Asn	Cys	Pro	Cys	Pro	Glu	Glu	Ile	Arg
	1880					1885					1890			
Glu	Glu	Leu	Tyr	Asp	Phe	His	Glu	Asp	Leu	Leu	Leu	His	Cys	Gly
	1895					1900					1905			
Val	Pro	Leu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Thr	Ser	Trp
	1910					1915					1920			
Thr	Gly	Lys	Leu	Cys	Ala	Leu	Val	Tyr	Lys	Ile	Lys	Gly	Pro	Pro
	1925					1930					1935			
Lys	Pro	Glu	Lys	Glu	Gln	Pro	Thr	Glu	Glu	Glu	Glu	Arg	Cys	Pro
	1940					1945					1950			
Thr	Thr	Leu	Lys	Glu	Leu	Ile	Ser	Gln	Thr	Met	Ile	Cys	Trp	Ala
	1955					1960					1965			
Gln	Glu	Asp	Gln	Ile	Gln	Asp	Ser	Glu	Leu	Val	Arg	Met	Met	Phe
	1970					1975					1980			
Asn	Leu	Leu	Arg	Arg	Gln	Tyr	Asp	Ser	Ile	Gly	Glu	Leu	Leu	Gln
	1985					1990					1995			
Ala	Leu	Arg	Lys	Thr	Tyr	Thr	Ile	Ser	His	Thr	Ser	Val	Ser	Asp
	2000					2005					2010			
Thr	Ile	Asn	Leu	Leu	Ala	Ala	Leu	Gly	Gln	Ile	Arg	Ser	Leu	Leu
	2015					2020					2025			
Ser	Val	Arg	Met	Gly	Lys	Glu	Glu	Glu	Leu	Leu	Met	Ile	Asn	Gly
	2030					2035					2040			
Leu	Gly	Asp	Ile	Met	Asn	Asn	Lys	Val	Phe	Tyr	Gln	His	Pro	Asn
	2045					2050					2055			
Leu	Met	Arg	Val	Leu	Gly	Met	His	Glu	Thr	Val	Met	Glu	Val	Met
	2060					2065					2070			

Val	Asn	Val	Leu	Gly	Thr	Glu	Lys	Ser	Gln	Ile	Ala	Phe	Pro	Lys
	2075					2080					2085			
Met	Val	Ala	Ser	Cys	Cys	Arg	Phe	Leu	Cys	Tyr	Phe	Cys	Arg	Ile
	2090					2095					2100			
Ser	Arg	Gln	Asn	Gln	Lys	Ala	Met	Phe	Glu	His	Leu	Ser	Tyr	Leu
	2105					2110					2115			
Leu	Glu	Asn	Ser	Ser	Val	Gly	Leu	Ala	Ser	Pro	Ser	Met	Arg	Gly
	2120					2125					2130			
Ser	Thr	Pro	Leu	Asp	Val	Ala	Ala	Ser	Ser	Val	Met	Asp	Asn	Asn
	2135					2140					2145			
Glu	Leu	Ala	Leu	Ser	Leu	Glu	Glu	Pro	Asp	Leu	Glu	Lys	Val	Val
	2150					2155					2160			
Thr	Tyr	Leu	Ala	Gly	Cys	Gly	Leu	Gln	Ser	Cys	Pro	Met	Leu	Leu
	2165					2170					2175			
Ala	Lys	Gly	Tyr	Pro	Asp	Val	Gly	Trp	Asn	Pro	Ile	Glu	Gly	Glu
	2180					2185					2190			
Arg	Tyr	Leu	Ser	Phe	Leu	Arg	Phe	Ala	Val	Phe	Val	Asn	Ser	Glu
	2195					2200					2205			
Ser	Val	Glu	Glu	Asn	Ala	Ser	Val	Val	Val	Lys	Leu	Leu	Ile	Arg
	2210					2215					2220			
Arg	Pro	Glu	Cys	Phe	Gly	Pro	Ala	Leu	Arg	Gly	Glu	Gly	Gly	Asn
	2225					2230					2235			
Gly	Leu	Leu	Ala	Ala	Met	Gln	Gly	Ala	Ile	Lys	Ile	Ser	Glu	Asn
	2240					2245					2250			
Pro	Ala	Leu	Asp	Leu	Pro	Ser	Gln	Gly	Tyr	Lys	Arg	Glu	Val	Ser
	2255					2260					2265			
Thr	Glu	Asp	Asp	Glu	Glu	Glu	Glu	Glu	Ile	Val	His	Met	Gly	Asn
	2270					2275					2280			
Ala	Ile	Met	Ser	Phe	Tyr	Ser	Ala	Leu	Ile	Asp	Leu	Leu	Gly	Arg
	2285					2290					2295			
Cys	Ala	Pro	Glu	Met	His	Leu	Ile	Gln	Thr	Gly	Lys	Gly	Glu	Ala
	2300					2305					2310			

Ile Arg Ile Arg Ser Ile Leu Arg Ser Leu Val Pro Thr Glu Asp
 2315 2320 2325
 Leu Val Gly Ile Ile Ser Ile Pro Leu Lys Leu Pro Ser Leu Asn
 2330 2335 2340
 Lys Asp Gly Ser Val Ser Glu Pro Asp Met Ala Ala Asn Phe Cys
 2345 2350 2355
 Pro Asp His Lys Ala Pro Met Val Leu Phe Leu Asp Arg Val Tyr
 2360 2365 2370
 Gly Ile Lys Asp Gln Thr Phe Leu Leu His Leu Leu Glu Val Gly
 2375 2380 2385
 Phe Leu Pro Asp Leu Arg Ala Ser Ala Ser Leu Asp Thr Val Ser
 2390 2395 2400
 Leu Ser Thr Thr Glu Ala Ala Leu Ala Leu Asn Arg Tyr Ile Cys
 2405 2410 2415
 Ser Ala Val Leu Pro Leu Leu Thr Arg Cys Ala Pro Leu Phe Ala
 2420 2425 2430
 Gly Thr Glu His Cys Thr Ser Leu Ile Asp Ser Thr Leu Gln Thr
 2435 2440 2445
 Ile Tyr Arg Leu Ser Lys Gly Arg Ser Leu Thr Lys Ala Gln Arg
 2450 2455 2460
 Asp Thr Ile Glu Glu Cys Leu Leu Ala Ile Cys Asn His Leu Arg
 2465 2470 2475
 Pro Ser Met Leu Gln Gln Leu Leu Arg Arg Leu Val Phe Asp Val
 2480 2485 2490
 Pro Gln Leu Asn Glu Tyr Cys Lys Met Pro Leu Lys Leu Leu Thr
 2495 2500 2505
 Asn His Tyr Glu Gln Cys Trp Lys Tyr Tyr Cys Leu Pro Ser Gly
 2510 2515 2520
 Trp Gly Ser Tyr Gly Leu Ala Val Glu Glu Glu Leu His Leu Thr
 2525 2530 2535
 Glu Lys Leu Phe Trp Gly Ile Phe Asp Ser Leu Ser His Lys Lys
 2540 2545 2550

Tyr	Asp	Pro	Asp	Leu	Phe	Arg	Met	Ala	Leu	Pro	Cys	Leu	Ser	Ala
	2555					2560					2565			
Ile	Ala	Gly	Ala	Leu	Pro	Pro	Asp	Tyr	Leu	Asp	Thr	Arg	Ile	Thr
	2570					2575					2580			
Ala	Thr	Leu	Glu	Lys	Gln	Ile	Ser	Val	Asp	Ala	Asp	Gly	Asn	Phe
	2585					2590					2595			
Asp	Pro	Lys	Pro	Ile	Asn	Thr	Met	Asn	Phe	Ser	Leu	Pro	Glu	Lys
	2600					2605					2610			
Leu	Glu	Tyr	Ile	Val	Thr	Lys	Tyr	Ala	Glu	His	Ser	His	Asp	Lys
	2615					2620					2625			
Trp	Ala	Cys	Asp	Lys	Ser	Gln	Ser	Gly	Trp	Lys	Tyr	Gly	Ile	Ser
	2630					2635					2640			
Leu	Asp	Glu	Asn	Val	Lys	Thr	His	Pro	Leu	Ile	Arg	Pro	Phe	Lys
	2645					2650					2655			
Thr	Leu	Thr	Glu	Lys	Glu	Lys	Glu	Ile	Tyr	Arg	Trp	Pro	Ala	Arg
	2660					2665					2670			
Glu	Ser	Leu	Lys	Thr	Met	Leu	Ala	Val	Gly	Trp	Thr	Val	Glu	Arg
	2675					2680					2685			
Thr	Lys	Glu	Gly	Glu	Ala	Leu	Val	Gln	Gln	Arg	Glu	Asn	Glu	Lys
	2690					2695					2700			
Leu	Arg	Ser	Val	Ser	Gln	Ala	Asn	Gln	Gly	Asn	Ser	Tyr	Ser	Pro
	2705					2710					2715			
Ala	Pro	Leu	Asp	Leu	Ser	Asn	Val	Val	Leu	Ser	Arg	Glu	Leu	Gln
	2720					2725					2730			
Gly	Met	Val	Glu	Val	Val	Ala	Glu	Asn	Tyr	His	Asn	Ile	Trp	Ala
	2735					2740					2745			
Lys	Lys	Lys	Lys	Leu	Glu	Leu	Glu	Ser	Lys	Gly	Gly	Gly	Ser	His
	2750					2755					2760			
Pro	Leu	Leu	Val	Pro	Tyr	Asp	Thr	Leu	Thr	Ala	Lys	Glu	Lys	Phe
	2765					2770					2775			
Lys	Asp	Arg	Glu	Lys	Ala	Gln	Asp	Leu	Phe	Lys	Phe	Leu	Gln	Val
	2780					2785					2790			

Asn Gly Ile Ile Val Ser Arg Gly Met Lys Asp Met Glu Leu Asp
 2795 2800 2805
 Ala Ser Ser Met Glu Lys Arg Phe Ala Tyr Lys Phe Leu Lys Lys
 2810 2815 2820
 Ile Leu Lys Tyr Val Asp Ser Ala Gln Glu Phe Ile Ala His Leu
 2825 2830 2835
 Glu Ala Ile Val Ser Ser Gly Lys Thr Glu Lys Ser Pro Arg Asp
 2840 2845 2850
 Gln Glu Ile Lys Phe Phe Ala Lys Val Leu Leu Pro Leu Val Asp
 2855 2860 2865
 Gln Tyr Phe Thr Ser His Cys Leu Tyr Phe Leu Ser Ser Pro Leu
 2870 2875 2880
 Lys Pro Leu Ser Ser Ser Gly Tyr Ala Ser His Lys Glu Lys Glu
 2885 2890 2895
 Met Val Ala Gly Leu Phe Cys Lys Leu Ala Ala Leu Val Arg His
 2900 2905 2910
 Arg Ile Ser Leu Phe Gly Ser Asp Ser Thr Thr Met Val Ser Cys
 2915 2920 2925
 Leu His Ile Leu Ala Gln Thr Leu Asp Thr Arg Thr Val Met Lys
 2930 2935 2940
 Ser Gly Ser Glu Leu Val Lys Ala Gly Leu Arg Ala Phe Phe Glu
 2945 2950 2955
 Asn Ala Ala Glu Asp Leu Glu Lys Thr Ser Glu Asn Leu Lys Leu
 2960 2965 2970
 Gly Lys Phe Thr His Ser Arg Thr Gln Ile Lys Gly Val Ser Gln
 2975 2980 2985
 Asn Ile Asn Tyr Thr Thr Val Ala Leu Leu Pro Ile Leu Thr Ser
 2990 2995 3000
 Ile Phe Glu His Val Thr Gln His Gln Phe Gly Met Asp Leu Leu
 3005 3010 3015
 Leu Gly Asp Val Gln Ile Ser Cys Tyr His Ile Leu Cys Ser Leu
 3020 3025 3030

Tyr Ser Leu Gly Thr Gly Lys Asn Ile Tyr Val Glu Arg Gln Arg
 3035 3040 3045
 Pro Ala Leu Gly Glu Cys Leu Ala Ser Leu Ala Ala Ala Ile Pro
 3050 3055 3060
 Val Ala Phe Leu Glu Pro Thr Leu Asn Arg Tyr Asn Pro Leu Ser
 3065 3070 3075
 Val Phe Asn Thr Lys Thr Pro Arg Glu Arg Ser Ile Leu Gly Met
 3080 3085 3090
 Pro Asp Thr Val Glu Asp Met Cys Pro Asp Ile Pro Gln Leu Glu
 3095 3100 3105
 Gly Leu Met Lys Glu Ile Asn Asp Leu Ala Glu Ser Gly Ala Arg
 3110 3115 3120
 Tyr Thr Glu Met Pro His Val Ile Glu Val Ile Leu Pro Met Leu
 3125 3130 3135
 Cys Asn Tyr Leu Ser Tyr Trp Trp Glu Arg Gly Pro Glu Asn Leu
 3140 3145 3150
 Pro Pro Ser Thr Gly Pro Cys Cys Thr Lys Val Thr Ser Glu His
 3155 3160 3165
 Leu Ser Leu Ile Leu Gly Asn Ile Leu Lys Ile Ile Asn Asn Asn
 3170 3175 3180
 Leu Gly Ile Asp Glu Ala Ser Trp Met Lys Arg Ile Ala Val Tyr
 3185 3190 3195
 Ala Gln Pro Ile Ile Ser Lys Ala Arg Pro Asp Leu Leu Arg Ser
 3200 3205 3210
 His Phe Ile Pro Thr Leu Glu Lys Leu Lys Lys Lys Ala Val Lys
 3215 3220 3225
 Thr Val Gln Glu Glu Glu Gln Leu Lys Ala Asp Gly Lys Gly Asp
 3230 3235 3240
 Thr Gln Glu Ala Glu Leu Leu Ile Leu Asp Glu Phe Ala Val Leu
 3245 3250 3255
 Cys Arg Asp Leu Tyr Ala Phe Tyr Pro Met Leu Ile Arg Tyr Val
 3260 3265 3270

Asp Asn Asn Arg Ser Asn Trp Leu Lys Ser Pro Asp Ala Asp Ser
 3275 3280 3285
 Asp Gln Leu Phe Arg Met Val Ala Glu Val Phe Ile Leu Trp Cys
 3290 3295 3300
 Lys Ser His Asn Phe Lys Arg Glu Glu Gln Asn Phe Val Ile Gln
 3305 3310 3315
 Asn Glu Ile Asn Asn Leu Ala Phe Leu Thr Gly Asp Ser Lys Ser
 3320 3325 3330
 Lys Met Ser Lys Ala Met Gln Val Lys Ser Gly Gly Gln Asp Gln
 3335 3340 3345
 Glu Arg Lys Lys Thr Lys Arg Arg Gly Asp Leu Tyr Ser Ile Gln
 3350 3355 3360
 Thr Ser Leu Ile Val Ala Ala Leu Lys Lys Met Leu Pro Ile Gly
 3365 3370 3375
 Leu Asn Met Cys Thr Pro Gly Asp Gln Glu Leu Ile Ser Leu Ala
 3380 3385 3390
 Lys Ser Arg Tyr Ser His Arg Asp Thr Asp Glu Glu Val Arg Glu
 3395 3400 3405
 His Leu Arg Asn Asn Leu His Leu Gln Glu Lys Ser Asp Asp Pro
 3410 3415 3420
 Ala Val Lys Trp Gln Leu Asn Leu Tyr Lys Asp Val Leu Lys Ser
 3425 3430 3435
 Glu Glu Pro Phe Asn Pro Glu Lys Thr Val Glu Arg Val Gln Arg
 3440 3445 3450
 Ile Ser Ala Ala Val Phe His Leu Glu Gln Val Glu Gln Pro Leu
 3455 3460 3465
 Arg Ser Lys Lys Ala Val Trp His Lys Leu Leu Ser Lys Gln Arg
 3470 3475 3480
 Lys Arg Ala Val Val Ala Cys Phe Arg Met Ala Pro Leu Tyr Asn
 3485 3490 3495
 Leu Pro Arg His Arg Ser Ile Asn Leu Phe Leu His Gly Tyr Gln
 3500 3505 3510

Arg Phe Trp Ile Glu Thr Glu Glu Tyr Ser Phe Glu Glu Lys Leu
 3515 3520 3525
 Val Gln Asp Leu Ala Lys Ser Pro Lys Val Glu Glu Glu Glu
 3530 3535 3540
 Glu Glu Thr Glu Lys Gln Pro Asp Pro Leu His Gln Ile Ile Leu
 3545 3550 3555
 Tyr Phe Ser Arg Asn Ala Leu Thr Glu Arg Ser Lys Leu Glu Asp
 3560 3565 3570
 Asp Pro Leu Tyr Thr Ser Tyr Ser Ser Met Met Ala Lys Ser Cys
 3575 3580 3585
 Gln Ser Gly Glu Asp Glu Glu Glu Asp Glu Asp Lys Glu Lys Thr
 3590 3595 3600
 Phe Glu Glu Lys Glu Met Glu Lys Gln Lys Thr Leu Tyr Gln Gln
 3605 3610 3615
 Ala Arg Leu His Glu Arg Gly Ala Ala Glu Met Val Leu Gln Met
 3620 3625 3630
 Ile Ser Ala Ser Lys Gly Glu Met Ser Pro Met Val Val Glu Thr
 3635 3640 3645
 Leu Lys Leu Gly Ile Ala Ile Leu Asn Gly Gly Asn Ala Gly Val
 3650 3655 3660
 Gln Gln Lys Met Leu Asp Tyr Leu Lys Glu Lys Lys Asp Ala Gly
 3665 3670 3675
 Phe Phe Gln Ser Leu Ser Gly Leu Met Gln Ser Cys Ser Val Leu
 3680 3685 3690
 Asp Leu Asn Ala Phe Glu Arg Gln Asn Lys Ala Glu Gly Leu Gly
 3695 3700 3705
 Met Val Thr Glu Glu Gly Thr Leu Ile Val Arg Glu Arg Gly Glu
 3710 3715 3720
 Lys Val Leu Gln Asn Asp Glu Phe Thr Arg Asp Leu Phe Arg Phe
 3725 3730 3735
 Leu Gln Leu Leu Cys Glu Gly His Asn Ser Asp Phe Gln Asn Phe
 3740 3745 3750

Leu Arg Thr Gln Met Gly Asn Thr Thr Thr Val Asn Val Ile Ile
 3755 3760 3765
 Ser Thr Val Asp Tyr Leu Leu Arg Leu Gln Glu Ser Ile Ser Asp
 3770 3775 3780
 Phe Tyr Trp Tyr Tyr Ser Gly Lys Asp Ile Ile Asp Glu Ser Gly
 3785 3790 3795
 Gln His Asn Phe Ser Lys Ala Leu Ala Val Thr Lys Gln Ile Phe
 3800 3805 3810
 Asn Ser Leu Thr Glu Tyr Ile Gln Gly Pro Cys Ile Gly Asn Gln
 3815 3820 3825
 Gln Ser Leu Ala His Ser Arg Leu Trp Asp Ala Val Val Gly Phe
 3830 3835 3840
 Leu His Val Phe Ala Asn Met Gln Met Lys Leu Ser Gln Asp Ser
 3845 3850 3855
 Ser Gln Ile Glu Leu Leu Lys Glu Leu Leu Asp Leu Leu Gln Asp
 3860 3865 3870
 Met Val Val Met Leu Leu Ser Leu Leu Glu Gly Asn Val Val Asn
 3875 3880 3885
 Gly Thr Ile Gly Lys Gln Met Val Asp Thr Leu Val Glu Ser Ser
 3890 3895 3900
 Thr Asn Val Glu Met Ile Leu Lys Phe Phe Asp Met Phe Leu Lys
 3905 3910 3915
 Leu Lys Asp Leu Thr Ser Ser Asp Thr Phe Lys Glu Tyr Asp Pro
 3920 3925 3930
 Asp Gly Lys Gly Ile Ile Ser Lys Lys Glu Phe Gln Lys Ala Met
 3935 3940 3945
 Glu Gly Gln Lys Gln Tyr Thr Gln Ser Glu Ile Asp Phe Leu Leu
 3950 3955 3960
 Ser Cys Ala Glu Ala Asp Glu Asn Asp Met Phe Asn Tyr Val Asp
 3965 3970 3975
 Phe Val Asp Arg Phe His Glu Pro Ala Lys Asp Ile Gly Phe Asn
 3980 3985 3990

Val	Ala	Val	Leu	Leu	Thr	Asn	Leu	Ser	Glu	His	Met	Pro	Asn	Asp
	3995					4000					4005			
Ser	Arg	Leu	Lys	Cys	Leu	Leu	Asp	Pro	Ala	Glu	Ser	Val	Leu	Asn
	4010					4015					4020			
Tyr	Phe	Glu	Pro	Tyr	Leu	Gly	Arg	Ile	Glu	Ile	Met	Gly	Gly	Ala
	4025					4030					4035			
Lys	Lys	Ile	Glu	Arg	Val	Tyr	Phe	Glu	Ile	Ser	Glu	Ser	Ser	Arg
	4040					4045					4050			
Thr	Gln	Trp	Glu	Lys	Pro	Gln	Val	Lys	Glu	Ser	Lys	Arg	Gln	Phe
	4055					4060					4065			
Ile	Phe	Asp	Val	Val	Asn	Glu	Gly	Gly	Glu	Gln	Glu	Lys	Met	Glu
	4070					4075					4080			
Leu	Phe	Val	Asn	Phe	Cys	Glu	Asp	Thr	Ile	Phe	Glu	Met	Gln	Leu
	4085					4090					4095			
Ala	Ser	Gln	Ile	Ser	Glu	Ser	Asp	Ser	Ala	Asp	Arg	Pro	Glu	Glu
	4100					4105					4110			
Glu	Glu	Glu	Asp	Glu	Asp	Ser	Ser	Tyr	Val	Leu	Glu	Ile	Ala	Gly
	4115					4120					4125			
Glu	Glu	Glu	Glu	Asp	Gly	Ser	Leu	Glu	Pro	Ala	Ser	Ala	Phe	Ala
	4130					4135					4140			
Met	Ala	Cys	Ala	Ser	Val	Lys	Arg	Asn	Val	Thr	Asp	Phe	Leu	Lys
	4145					4150					4155			
Arg	Ala	Thr	Leu	Lys	Asn	Leu	Arg	Lys	Gln	Tyr	Arg	Asn	Val	Lys
	4160					4165					4170			
Lys	Met	Thr	Ala	Lys	Glu	Leu	Val	Lys	Val	Leu	Phe	Ser	Phe	Phe
	4175					4180					4185			
Trp	Met	Leu	Phe	Val	Gly	Leu	Phe	Gln	Leu	Leu	Phe	Thr	Ile	Leu
	4190					4195					4200			
Gly	Gly	Ile	Phe	Gln	Ile	Leu	Trp	Ser	Thr	Val	Phe	Gly	Gly	Gly
	4205					4210					4215			
Leu	Val	Glu	Gly	Ala	Lys	Asn	Ile	Arg	Val	Thr	Lys	Ile	Leu	Gly
	4220					4225					4230			

Asp Met Pro Asp Pro Thr Gln Phe Gly Ile His Asp Asp Thr Met
 4235 4240 4245
 Glu Ala Glu Arg Ala Glu Val Met Glu Pro Gly Ile Thr Thr Glu
 4250 4255 4260
 Leu Val His Phe Ile Lys Gly Glu Lys Gly Asp Thr Asp Ile Met
 4265 4270 4275
 Ser Asp Leu Phe Gly Leu His Pro Lys Lys Glu Gly Ser Leu Lys
 4280 4285 4290
 His Gly Pro Glu Val Gly Leu Gly Asp Leu Ser Glu Ile Ile Gly
 4295 4300 4305
 Lys Asp Glu Pro Pro Thr Leu Glu Ser Thr Val Gln Lys Lys Arg
 4310 4315 4320
 Lys Ala Gln Ala Ala Glu Met Lys Ala Ala Asn Glu Ala Glu Gly
 4325 4330 4335
 Lys Val Glu Ser Glu Lys Ala Asp Met Glu Asp Gly Glu Lys Glu
 4340 4345 4350
 Asp Lys Asp Lys Glu Glu Glu Gln Ala Glu Tyr Leu Trp Thr Glu
 4355 4360 4365
 Val Thr Lys Lys Lys Lys Arg Arg Cys Gly Gln Lys Val Glu Lys
 4370 4375 4380
 Pro Glu Ala Phe Thr Ala Asn Phe Phe Lys Gly Leu Glu Ile Tyr
 4385 4390 4395
 Gln Thr Lys Leu Leu His Tyr Leu Ala Arg Asn Phe Tyr Asn Leu
 4400 4405 4410
 Arg Phe Leu Ala Leu Phe Val Ala Phe Ala Ile Asn Phe Ile Leu
 4415 4420 4425
 Leu Phe Tyr Lys Val Thr Glu Glu Pro Leu Glu Glu Glu Thr Glu
 4430 4435 4440
 Asp Val Ala Asn Leu Trp Asn Ser Phe Asn Asp Glu Glu Glu Glu
 4445 4450 4455
 Glu Ala Met Val Phe Phe Val Leu Gln Glu Ser Thr Gly Tyr Met
 4460 4465 4470

Ala Pro Thr Leu Arg Ala Leu Ala Ile Ile His Thr Ile Ile Ser
 4475 4480 4485
 Leu Val Cys Val Val Gly Tyr Tyr Cys Leu Lys Val Pro Leu Val
 4490 4495 4500
 Val Phe Lys Arg Glu Lys Glu Ile Ala Arg Lys Leu Glu Phe Asp
 4505 4510 4515
 Gly Leu Tyr Ile Thr Glu Gln Pro Ser Glu Asp Asp Ile Lys Gly
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 Gln Trp Asp Arg Leu Val Ile Asn Thr Pro Ser Phe Pro Asn Asn
 4535 4540 4545
 Tyr Trp Asp Lys Phe Val Lys Arg Lys Val Ile Asn Lys Tyr Gly
 4550 4555 4560
 Asp Leu Tyr Gly Ala Glu Arg Ile Ala Glu Leu Leu Gly Leu Asp
 4565 4570 4575
 Lys Asn Ala Leu Asp Phe Ser Pro Val Glu Glu Thr Lys Ala Glu
 4580 4585 4590
 Ala Ala Ser Leu Val Ser Trp Leu Ser Ser Ile Asp Met Lys Tyr
 4595 4600 4605
 His Ile Trp Lys Leu Gly Val Val Phe Thr Asp Asn Ser Phe Leu
 4610 4615 4620
 Tyr Leu Ala Trp Tyr Thr Thr Met Ser Val Leu Gly His Tyr Asn
 4625 4630 4635
 Asn Phe Phe Phe Ala Ala His Leu Leu Asp Ile Ala Met Gly Phe
 4640 4645 4650
 Lys Thr Leu Arg Thr Ile Leu Ser Ser Val Thr His Asn Gly Lys
 4655 4660 4665
 Gln Leu Val Leu Thr Val Gly Leu Leu Ala Val Val Val Tyr Leu
 4670 4675 4680
 Tyr Thr Val Val Ala Phe Asn Phe Phe Arg Lys Phe Tyr Asn Lys
 4685 4690 4695
 Ser Glu Asp Asp Asp Glu Pro Asp Met Lys Cys Asp Asp Met Met
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Thr Cys Tyr Leu Phe His Met Tyr Val Gly Val Arg Ala Gly Gly
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Gly Ile Gly Asp Glu Ile Glu Asp Pro Ala Gly Asp Pro Tyr Glu
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Met Tyr Arg Ile Val Phe Asp Ile Thr Phe Phe Phe Phe Val Ile
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Val Ile Leu Leu Ala Ile Ile Gln Gly Leu Ile Ile Asp Ala Phe
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Gly Glu Leu Arg Asp Gln Gln Glu Gln Val Arg Glu Asp Met Glu
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Thr Lys Cys Phe Ile Cys Gly Ile Gly Asn Asp Tyr Phe Asp Thr
4790 4795 4800

Thr Pro His Gly Phe Glu Thr His Thr Leu Gln Glu His Asn Leu
4805 4810 4815

Ala Asn Tyr Leu Phe Phe Leu Met Tyr Leu Ile Asn Lys Asp Glu
4820 4825 4830

Thr Glu His Thr Gly Gln Glu Ser Tyr Val Trp Lys Met Tyr Gln
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Glu Arg Cys Trp Asp Phe Phe Pro Ala Gly Asp Cys Phe Arg Lys
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Gln Tyr Glu Asp Gln Leu Gly
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<213> Homo sapiens

<400> 145

Met Ser Leu His Ser Thr His Asn Arg Asn Asn Ser Gly Asp Ile Leu
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Asp Ile Pro Ser Ser Gln Asn Ser Ser Ser Leu Asn Ala Leu Thr His
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Ser Ser Arg Leu Lys Leu His Leu Lys Ser Asp Met Ser Glu Cys Glu
35 40 45

Asn Asp Asp Pro Leu Leu Arg Ser Ala Gly Lys Val Arg Asp Ile Asn
 50 55 60

Arg Thr Tyr Val Ile Ser Ala Ser Arg Lys Thr Ala Asp Met Pro Leu
 65 70 75 80

Thr Pro Asn Pro Val Gly Arg Leu Ala Leu Gln Arg Arg Thr Thr Arg
 85 90 95

Asn Lys Glu Ser Ser Leu Leu Val Ser Glu Leu Glu Asp Thr Thr Glu
 100 105 110

Lys Thr Ala Glu Thr Arg Leu Thr Leu Gln Arg Arg Ala Lys Thr Asp
 115 120 125

Ser Ala Glu Lys Trp Lys Thr Ala Glu Ile Asp Ser Val Lys Met Thr
 130 135 140

Leu Asn Val Gly Gly Glu Thr Glu Asn Asn Gly Val Ser Lys Glu Ser
 145 150 155 160

Arg Thr Asn Val Arg Ile Val Asn Asn Ala Lys Asn Ser Phe Val Ala
 165 170 175

Ser Ser Val Pro Leu Asp Glu Asp Pro Gln Val Ile Glu Met Met Ala
 180 185 190

Asp Lys Lys Tyr Lys Glu Thr Phe Ser Ala Pro Ser Arg Ala Asn Glu
 195 200 205

Asn Val Ala Leu Lys Tyr Ser Ser Asn Arg Pro Pro Ile Ala Ser Leu
 210 215 220

Ser Gln Thr Glu Val Val Arg Ser Gly His Leu Thr Thr Lys Pro Thr
 225 230 235 240

Gln Ser Lys Leu Asp Ile Lys Val Leu Gly Thr Gly Asn Leu Tyr His
 245 250 255

Arg Ser Ile Gly Lys Glu Ile Ala Lys Thr Ser Asn Lys Phe Gly Ser
 260 265 270

Leu Glu Lys Arg Thr Pro Thr Lys Cys Thr Thr Glu His Lys Leu Thr
 275 280 285

Thr Lys Cys Ser Leu Pro Gln Leu Lys Ser Pro Ala Pro Ser Ile Leu
 290 295 300

Lys Asn Arg Met Ser Asn Leu Gln Val Lys Gln Arg Pro Lys Ser Ser
305 310 315 320

Phe Leu Ala Asn Lys Gln Glu Arg Ser Ala Glu Asn Thr Ile Leu Pro
325 330 335

Glu Glu Glu Thr Val Val Gln Asn Thr Ser Ala Gly Lys Asp Pro Leu
340 345 350

Lys Val Glu Asn Ser Gln Val Thr Val Ala Val Arg Val Arg Pro Phe
355 360 365

Thr Lys Arg Glu Lys Ile Glu Lys Ala Ser Gln Val Val Phe Met Ser
370 375 380

Gly Lys Glu Ile Thr Val Glu His Pro Asp Thr Lys Gln Val Tyr Asn
385 390 395 400

Phe Ile Tyr Asp Val Ser Phe Trp Ser Phe Asp Glu Cys His Pro His
405 410 415

Tyr Ala Ser Gln Thr Thr Val Tyr Glu Lys Leu Ala Ala Pro Leu Leu
420 425 430

Glu Arg Ala Phe Glu Gly Phe Asn Thr Cys Leu Phe Ala Tyr Gly Gln
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Thr Gly Ser Gly Lys Ser Tyr Thr Met Met Gly Phe Ser Glu Glu Pro
450 455 460

Gly Ile Ile Pro Arg Phe Cys Glu Asp Leu Phe Ser Gln Val Ala Arg
465 470 475 480

Lys Gln Thr Gln Glu Val Ser Tyr His Ile Glu Met Ser Phe Phe Glu
485 490 495

Val Tyr Asn Glu Lys Ile His Asp Leu Leu Val Cys Lys Asp Glu Asn
500 505 510

Gly Gln Arg Lys Gln Pro Leu Arg Val Arg Glu His Pro Val Tyr Gly
515 520 525

Pro Tyr Val Glu Ala Leu Ser Met Asn Ile Val Ser Ser Tyr Ala Asp
530 535 540

Ile Gln Ser Trp Leu Glu Leu Gly Asn Lys Gln Arg Ala Thr Ala Ala
545 550 555 560

Thr Gly Met Asn Asp Lys Ser Ser Arg Ser His Ser Val Phe Thr Leu
 565 570 575

Val Met Thr Gln Thr Lys Thr Glu Phe Val Glu Gly Glu Glu His Asp
 580 585 590

His Arg Ile Thr Ser Arg Ile Asn Leu Ile Asp Leu Ala Gly Ser Glu
 595 600 605

Arg Cys Ser Thr Ala His Thr Asn Gly Asp Arg Leu Lys Glu Gly Val
 610 615 620

Ser Ile Asn Lys Ser Leu Leu Thr Leu Gly Lys Val Ile Ser Ala Leu
 625 630 635 640

Ser Glu Gln Ala Asn Gln Arg Ser Val Phe Ile Pro Tyr Arg Glu Ser
 645 650 655

Val Leu Thr Trp Leu Leu Lys Glu Ser Leu Gly Gly Asn Ser Lys Thr
 660 665 670

Ala Met Ile Ala Thr Ile Ser Pro Ala Ala Ser Asn Ile Glu Glu Thr
 675 680 685

Leu Ser Thr Leu Arg Tyr Ala Asn Gln Ala Arg Leu Ile Val Asn Ile
 690 695 700

Ala Lys Val Asn Glu Asp Met Asn Ala Lys Leu Ile Arg Glu Leu Lys
 705 710 715 720

Ala Glu Ile Ala Lys Leu Lys Ala Ala Gln Arg Asn Ser Arg Asn Ile
 725 730 735

Asp Pro Glu Arg Tyr Arg Leu Cys Arg Gln Glu Ile Thr Ser Leu Arg
 740 745 750

Met Lys Leu His Gln Gln Glu Arg Asp Met Ala Glu Met Gln Arg Val
 755 760 765

Trp Lys Glu Lys Phe Glu Gln Ala Glu Lys Arg Lys Leu Gln Glu Thr
 770 775 780

Lys Glu Leu Gln Lys Ala Gly Ile Met Phe Gln Met Asp Asn His Leu
 785 790 795 800

Pro Asn Leu Val Asn Leu Asn Glu Asp Pro Gln Leu Ser Glu Met Leu
 805 810 815

Leu Tyr Met Ile Lys Glu Gly Thr Thr Thr Val Gly Lys Tyr Lys Pro
 820 825 830

Asn Ser Ser His Asp Ile Gln Leu Ser Gly Val Leu Ile Ala Asp Asp
 835 840 845

His Cys Thr Ile Lys Asn Phe Gly Gly Thr Val Ser Ile Ile Pro Val
 850 855 860

Gly Glu Ala Lys Thr Tyr Val Asn Gly Lys His Ile Leu Glu Ile Thr
 865 870 875 880

Val Leu Arg His Gly Asp Arg Val Ile Leu Gly Gly Asp His Tyr Phe
 885 890 895

Arg Phe Asn His Pro Val Glu Val Gln Lys Gly Lys Arg Pro Ser Gly
 900 905 910

Arg Asp Thr Pro Ile Ser Glu Gly Pro Lys Asp Phe Glu Phe Ala Lys
 915 920 925

Asn Glu Leu Leu Met Ala Gln Arg Ser Gln Leu Glu Ala Glu Ile Lys
 930 935 940

Glu Ala Gln Leu Lys Ala Lys Glu Glu Met Met Gln Gly Ile Gln Ile
 945 950 955 960

Ala Lys Glu Met Ala Gln Gln Glu Leu Ser Ser Gln Lys Ala Ala Tyr
 965 970 975

Glu Ser Lys Ile Lys Ala Leu Glu Ala Glu Leu Arg Glu Glu Ser Gln
 980 985 990

Arg Lys Lys Met Gln Glu Ile Asn Asn Gln Lys Ala Asn His Lys Ile
 995 1000 1005

Glu Glu Leu Glu Lys Ala Lys Gln His Leu Glu Gln Glu Ile Tyr
 1010 1015 1020

Val Asn Lys Lys Arg Leu Glu Met Glu Thr Leu Ala Thr Lys Gln
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Ala Leu Glu Asp His Ser Ile Arg His Ala Arg Ile Leu Glu Ala
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Leu Glu Thr Glu Lys Gln Lys Ile Ala Lys Glu Val Gln Ile Leu
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Gln Gln Asn Arg Asn Asn Arg Asp Lys Thr Phe Thr Val Gln Thr
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 Thr Trp Ser Ser Met Lys Leu Ser Met Met Ile Gln Glu Ala Asn
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 Ala Ile Ser Ser Lys Leu Lys Thr Tyr Tyr Val Phe Gly Arg His
 1100 1105 1110
 Asp Ile Ser Asp Lys Ser Ser Ser Asp Thr Ser Ile Arg Val Arg
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 Asn Leu Lys Leu Gly Ile Ser Thr Phe Trp Ser Leu Glu Lys Phe
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 Glu Ser Lys Leu Ala Ala Met Lys Glu Leu Tyr Glu Ser Asn Gly
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 Ser Asn Arg Gly Glu Asp Ala Phe Cys Asp Pro Glu Asp Glu Trp
 1160 1165 1170
 Glu Pro Asp Ile Thr Asp Ala Pro Val Ser Ser Leu Ser Arg Arg
 1175 1180 1185
 Arg Ser Arg Ser Leu Met Lys Asn Arg Arg Ile Ser Gly Cys Leu
 1190 1195 1200
 His Asp Ile Gln Val His Pro Ile Lys Asn Leu His Ser Ser His
 1205 1210 1215
 Ser Ser Gly Leu Met Asp Lys Ser Ser Thr Ile Tyr Ser Asn Ser
 1220 1225 1230
 Ala Glu Ser Phe Leu Pro Gly Ile Cys Lys Glu Leu Ile Gly Ser
 1235 1240 1245
 Ser Leu Asp Phe Phe Gly Gln Ser Tyr Asp Glu Glu Arg Thr Ile
 1250 1255 1260
 Ala Asp Ser Leu Ile Asn Ser Phe Leu Lys Ile Tyr Asn Gly Leu
 1265 1270 1275
 Phe Ala Ile Ser Lys Ala His Glu Glu Gln Asp Glu Glu Ser Gln
 1280 1285 1290
 Asp Asn Leu Phe Ser Ser Asp Arg Ala Ile Gln Ser Leu Thr Ile
 1295 1300 1305

Gln Thr Ala Cys Ala Phe Glu Gln Leu Val Val Leu Met Lys His
 1310 1315 1320
 Trp Leu Ser Asp Leu Leu Pro Cys Thr Asn Ile Ala Arg Leu Glu
 1325 1330 1335
 Asp Glu Leu Arg Gln Glu Val Lys Lys Leu Gly Gly Tyr Leu Gln
 1340 1345 1350
 Leu Phe Leu Gln Gly Cys Cys Leu Asp Ile Ser Ser Met Ile Lys
 1355 1360 1365
 Glu Ala Gln Lys Asn Ala Ile Gln Ile Val Gln Gln Ala Val Lys
 1370 1375 1380
 Tyr Val Gly Gln Leu Ala Val Leu Lys Gly Ser Lys Leu His Phe
 1385 1390 1395
 Leu Glu Asn Gly Asn Asn Lys Ala Ala Ser Val Gln Glu Glu Phe
 1400 1405 1410
 Met Asp Ala Val Cys Asp Gly Val Gly Leu Gly Met Lys Ile Leu
 1415 1420 1425
 Leu Asp Ser Gly Leu Glu Lys Ala Lys Glu Leu Gln His Glu Leu
 1430 1435 1440
 Phe Arg Gln Cys Thr Lys Asn Glu Val Thr Lys Glu Met Lys Thr
 1445 1450 1455
 Asn Ala Met Gly Leu Ile Arg Ser Leu Glu Asn Ile Phe Ala Glu
 1460 1465 1470
 Ser Lys Ile Lys Ser Phe Arg Arg Gln Val Gln Glu Glu Asn Phe
 1475 1480 1485
 Glu Tyr Gln Asp Phe Lys Arg Met Val Asn Arg Ala Pro Glu Phe
 1490 1495 1500
 Leu Lys Leu Lys His Cys Leu Glu Lys Ala Ile Glu Ile Ile Ile
 1505 1510 1515
 Ser Ala Leu Lys Gly Cys His Ser Asp Ile Asn Leu Leu Gln Thr
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 Cys Val Glu Ser Ile Arg Asn Leu Ala Ser Asp Phe Tyr Ser Asp
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Phe Ser Val Pro Ser Thr Ser Val Gly Ser Tyr Glu Ser Arg Val
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Thr His Ile Val His Gln Glu Leu Glu Ser Leu Ala Lys Ser Leu
1565 1570 1575

Leu Phe Cys Phe Glu Ser Glu Glu Ser Pro Asp Leu Leu Lys Pro
1580 1585 1590

Trp Glu Thr Tyr Asn Gln Asn Thr Lys Glu Glu His Gln Gln Ser
1595 1600 1605

Lys Ser Ser Gly Ile Asp Gly Ser Lys Asn Lys Gly Val Pro Lys
1610 1615 1620

Arg Val Tyr Glu Leu His Gly Ser Ser Pro Ala Val Ser Ser Glu
1625 1630 1635

Glu Cys Thr Pro Ser Arg Ile Gln Trp Val
1640 1645

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<213> Homo sapiens

<400> 146

Met Trp Leu Leu Val Ser Val Ile Leu Ile Ser Arg Ile Ser Ser Val
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Gly Gly Glu Ala Met Phe Cys Asp Phe Pro Lys Ile Asn His Gly Ile
20 25 30

Leu Tyr Asp Glu Glu Lys Tyr Lys Pro Phe Ser Gln Val Pro Thr Gly
35 40 45

Glu Val Phe Tyr Tyr Ser Cys Glu Tyr Asn Phe Val Ser Pro Ser Lys
50 55 60

Ser Phe Trp Thr Arg Ile Thr Cys Ala Glu Glu Gly Trp Ser Pro Thr
65 70 75 80

Pro Lys Cys Leu Arg Leu Cys Phe Phe Pro Phe Val Glu Asn Gly His
85 90 95

Ser Glu Ser Ser Gly Gln Thr His Leu Glu Gly Asp Thr Val Gln Ile
100 105 110

Ile Cys Asn Thr Gly Tyr Arg Leu Gln Asn Asn Glu Asn Asn Ile Ser
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115

120

125

Cys Val Glu Arg Gly Trp Ser Thr Pro Pro Lys Cys Arg Ser Thr Ile
 130 135 140

Ser Ala Glu Lys Cys Gly Pro Pro Pro Pro Ile Asp Asn Gly Asp Ile
 145 150 155 160

Thr Ser Phe Leu Leu Ser Val Tyr Ala Pro Gly Ser Ser Val Glu Tyr
 165 170 175

Gln Cys Gln Asn Leu Tyr Gln Leu Glu Gly Asn Asn Gln Ile Thr Cys
 180 185 190

Arg Asn Gly Gln Trp Ser Glu Pro Pro Lys Cys Leu Asp Pro Cys Val
 195 200 205

Ile Ser Gln Glu Ile Met Glu Lys Tyr Asn Ile Lys Leu Lys Trp Thr
 210 215 220

Asn Gln Gln Lys Leu Tyr Ser Arg Thr Gly Asp Ile Val Glu Phe Val
 225 230 235 240

Cys Lys Ser Gly Tyr His Pro Thr Lys Ser His Ser Phe Arg Ala Met
 245 250 255

Cys Gln Asn Gly Lys Leu Val Tyr Pro Ser Cys Glu Glu Lys
 260 265 270

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<211> 244

<212> PRT

<213> Homo sapiens

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Met Glu Leu Thr Ile Phe Ile Leu Arg Leu Ala Ile Tyr Ile Leu Thr
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Phe Pro Leu Tyr Leu Leu Asn Phe Leu Gly Leu Trp Ser Trp Ile Cys
 20 25 30

Lys Lys Trp Phe Pro Tyr Leu Leu Val Arg Phe Thr Val Ile Tyr Asn
 35 40 45

Glu Gln Met Ala Ser Lys Lys Arg Glu Leu Phe Ser Asn Leu Gln Glu
 50 55 60

Phe Ala Gly Pro Ser Gly Lys Leu Ser Leu Leu Glu Val Gly Cys Gly
 65 70 75 80

Thr Gly Ala Asn Phe Lys Phe Tyr Pro Pro Gly Cys Arg Val Thr Cys
85 90 95

Ile Asp Pro Asn Pro Asn Phe Glu Lys Phe Leu Ile Lys Ser Ile Ala
100 105 110

Glu Asn Arg His Leu Gln Phe Glu Arg Phe Val Val Ala Ala Gly Glu
115 120 125

Asn Met His Gln Val Ala Asp Gly Ser Val Asp Val Val Val Cys Thr
130 135 140

Leu Val Leu Cys Ser Val Lys Asn Gln Glu Arg Ile Leu Arg Glu Val
145 150 155 160

Cys Arg Val Leu Arg Pro Gly Gly Ala Phe Tyr Phe Met Glu His Val
165 170 175

Ala Ala Glu Cys Ser Thr Trp Asn Tyr Phe Trp Gln Gln Val Leu Asp
180 185 190

Pro Ala Trp His Leu Leu Phe Asp Gly Cys Asn Leu Thr Arg Glu Ser
195 200 205

Trp Lys Ala Leu Glu Arg Ala Ser Phe Ser Lys Leu Lys Leu Gln His
210 215 220

Ile Gln Ala Pro Leu Ser Trp Glu Leu Val Arg Pro His Ile Tyr Gly
225 230 235 240

Tyr Ala Val Lys

<210> 148
<211> 558
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<213> Homo sapiens
<400> 148

Met Ala Ala Leu Thr Arg Asp Pro Gln Phe Gln Lys Leu Gln Gln Trp
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Tyr Arg Glu His Arg Ser Glu Leu Asn Leu Arg Arg Leu Phe Asp Ala
20 25 30

Asn Lys Asp Arg Phe Asn His Phe Ser Leu Thr Leu Asn Thr Asn His
35 40 45

Gly His Ile Leu Val Asp Tyr Ser Lys Asn Leu Val Thr Glu Asp Val
 50 55 60

Met Arg Met Leu Val Asp Leu Ala Lys Ser Arg Gly Val Glu Ala Ala
 65 70 75 80

Arg Glu Arg Met Phe Asn Gly Glu Lys Ile Asn Tyr Thr Glu Gly Arg
 85 90 95

Ala Val Leu His Val Ala Leu Arg Asn Arg Ser Asn Thr Pro Ile Leu
 100 105 110

Val Asp Gly Lys Asp Val Met Pro Glu Val Asn Lys Val Leu Asp Lys
 115 120 125

Met Lys Ser Phe Cys Gln Arg Val Arg Ser Gly Asp Trp Lys Gly Tyr
 130 135 140

Thr Gly Lys Thr Ile Thr Asp Val Ile Asn Ile Gly Ile Gly Gly Ser
 145 150 155 160

Asp Leu Gly Pro Leu Met Val Thr Glu Ala Leu Lys Pro Tyr Ser Ser
 165 170 175

Gly Gly Pro Arg Val Trp Tyr Val Ser Asn Ile Asp Gly Thr His Ile
 180 185 190

Ala Lys Thr Leu Ala Gln Leu Asn Pro Glu Ser Ser Leu Phe Ile Ile
 195 200 205

Ala Ser Lys Thr Phe Thr Thr Gln Glu Thr Ile Thr Asn Ala Glu Thr
 210 215 220

Ala Lys Glu Trp Phe Leu Gln Ala Ala Lys Asp Pro Ser Ala Val Ala
 225 230 235 240

Lys His Phe Val Ala Leu Ser Thr Asn Thr Thr Lys Val Lys Glu Phe
 245 250 255

Gly Ile Asp Pro Gln Asn Met Phe Glu Phe Trp Asp Trp Val Gly Gly
 260 265 270

Arg Tyr Ser Leu Trp Ser Ala Ile Gly Leu Ser Ile Ala Leu His Val
 275 280 285

Gly Phe Asp Asn Phe Glu Gln Leu Leu Ser Gly Ala His Trp Met Asp
 290 295 300

Gln His Phe Arg Thr Thr Pro Leu Glu Lys Asn Ala Pro Val Leu Leu
305 310 315 320

Ala Leu Leu Gly Ile Trp Tyr Ile Asn Cys Phe Gly Cys Glu Thr His
325 330 335

Ala Met Leu Pro Tyr Asp Gln Tyr Leu His Arg Phe Ala Ala Tyr Phe
340 345 350

Gln Gln Gly Asp Met Glu Ser Asn Gly Lys Tyr Ile Thr Lys Ser Gly
355 360 365

Thr Arg Val Asp His Gln Thr Gly Pro Ile Val Trp Gly Glu Pro Gly
370 375 380

Thr Asn Gly Gln His Ala Phe Tyr Gln Leu Ile His Gln Gly Thr Lys
385 390 395 400

Met Ile Pro Cys Asp Phe Leu Ile Pro Val Gln Thr Gln His Pro Ile
405 410 415

Arg Lys Gly Leu His His Lys Ile Leu Leu Ala Asn Phe Leu Ala Gln
420 425 430

Thr Glu Ala Leu Met Arg Gly Lys Ser Thr Glu Glu Ala Arg Lys Glu
435 440 445

Leu Gln Ala Ala Gly Lys Ser Pro Glu Asp Leu Glu Arg Leu Leu Pro
450 455 460

His Lys Val Phe Glu Gly Asn Arg Pro Thr Asn Ser Ile Val Phe Thr
465 470 475 480

Lys Leu Thr Pro Phe Met Leu Gly Ala Leu Val Ala Met Tyr Glu His
485 490 495

Lys Ile Phe Val Gln Gly Ile Ile Trp Asp Ile Asn Ser Phe Asp Gln
500 505 510

Trp Gly Val Glu Leu Gly Lys Gln Leu Ala Lys Lys Ile Glu Pro Glu
515 520 525

Leu Asp Gly Ser Ala Gln Val Thr Ser His Asp Ala Ser Thr Asn Gly
530 535 540

Leu Ile Asn Phe Ile Lys Gln Gln Arg Glu Ala Arg Val Gln
545 550 555

<210> 149
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 <213> Homo sapiens

<400> 149

Met Lys Ser Val Leu Leu Leu Thr Thr Leu Leu Val Pro Ala His Leu
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Val Ala Ala Trp Ser Asn Asn Tyr Ala Val Asp Cys Pro Gln His Cys
 20 25 30

Asp Ser Ser Glu Cys Lys Ser Ser Pro Arg Cys Lys Arg Thr Val Leu
 35 40 45

Asp Asp Cys Gly Cys Cys Arg Val Cys Ala Ala Gly Arg Gly Glu Thr
 50 55 60

Cys Tyr Arg Thr Val Ser Gly Met Asp Gly Met Lys Cys Gly Pro Gly
 65 70 75 80

Leu Arg Cys Gln Pro Ser Asn Gly Glu Asp Pro Phe Gly Glu Glu Phe
 85 90 95

Gly Ile Cys Lys Asp Cys Pro Tyr Gly Thr Phe Gly Met Asp Cys Arg
 100 105 110

Glu Thr Cys Asn Cys Gln Ser Gly Ile Cys Asp Arg Gly Thr Gly Lys
 115 120 125

Cys Leu Lys Phe Pro Phe Phe Gln Tyr Ser Val Thr Lys Ser Ser Asn
 130 135 140

Arg Phe Val Ser Leu Thr Glu His Asp Met Ala Ser Gly Asp Gly Asn
 145 150 155 160

Ile Val Arg Glu Glu Val Val Lys Glu Asn Ala Ala Gly Ser Pro Val
 165 170 175

Met Arg Lys Trp Leu Asn Pro Arg
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<210> 150
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 <213> Homo sapiens

<400> 150

Met Ser Ser Gly Asn Ala Lys Ile Gly His Pro Ala Pro Asn Phe Lys
 Page 398

Glu Glu Asp Gly Lys Thr Lys Gly Tyr Ile Phe Leu Glu Tyr Ala Ser
 35 40 45
 Pro Ala His Ala Val Asp Ala Val Lys Asn Ala Asp Gly Tyr Lys Leu
 50 55 60
 Asp Lys Gln His Thr Phe Arg Val Asn Leu Phe Thr Asp Phe Asp Lys
 65 70 75 80
 Tyr Met Thr Ile Ser Asp Glu Trp Asp Ile Pro Glu Lys Gln Pro Phe
 85 90 95
 Lys Asp Leu Gly Asn Leu Arg Tyr Trp Leu Glu Glu Ala Glu Cys Arg
 100 105 110
 Asp Gln Tyr Ser Val Ile Phe Glu Ser Gly Asp Arg Thr Ser Ile Phe
 115 120 125
 Trp Asn Asp Val Lys Asp Pro Val Ser Ile Glu Glu Arg Ala Arg Trp
 130 135 140
 Thr Glu Thr Tyr Val Arg Trp Ser Pro Lys Gly Thr Tyr Leu Ala Thr
 145 150 155 160
 Phe His Gln Arg Gly Ile Ala Leu Trp Gly Gly Glu Lys Phe Lys Gln
 165 170 175
 Ile Gln Arg Phe Ser His Gln Gly Val Gln Leu Ile Asp Phe Ser Pro
 180 185 190
 Cys Glu Arg Tyr Leu Val Thr Phe Ser Pro Leu Met Asp Thr Gln Asp
 195 200 205
 Asp Pro Gln Ala Ile Ile Ile Trp Asp Ile Leu Thr Gly His Lys Lys
 210 215 220
 Arg Gly Phe His Cys Glu Ser Ser Ala His Trp Pro Ile Phe Lys Trp
 225 230 235 240
 Ser His Asp Gly Lys Phe Phe Ala Arg Met Thr Leu Asp Thr Leu Ser
 245 250 255
 Ile Tyr Glu Thr Pro Ser Met Gly Leu Leu Asp Lys Lys Ser Leu Lys
 260 265 270
 Ile Ser Gly Ile Lys Asp Phe Ser Trp Ser Pro Gly Gly Asn Ile Ile
 275 280 285

Ala Phe Trp Val Pro Glu Asp Lys Asp Ile Pro Ala Arg Val Thr Leu
290 295 300
Met Leu Pro Thr Arg Gln Glu Ile Arg Val Arg Asn Leu Phe Asn Val
305 310 315 320
Val Asp Cys Lys Leu His Trp Gln Lys Asn Gly Asp Tyr Leu Cys Val
325 330 335
Lys Val Tyr Arg Thr Pro Lys Gly Thr Gln Gly Val Val Thr Asn Phe
340 345 350
Glu Ile Phe Arg Met Arg Glu Lys Gln Val Pro Val Asp Val Val Glu
355 360 365
Met Lys Glu Thr Ile Ile Ala Phe Ala Trp Glu Pro Asn Gly Ser Lys
370 375 380
Phe Ala Val Leu His Gly Glu Ala Pro Arg Ile Ser Val Ser Phe Tyr
385 390 395 400
His Val Lys Asn Asn Gly Lys Ile Glu Leu Ile Lys Met Phe Asp Lys
405 410 415
Gln Gln Ala Asn Thr Ile Phe Trp Ser Pro Gln Gly Gln Phe Val Val
420 425 430
Leu Ala Gly Leu Arg Ser Met Asn Gly Ala Leu Ala Phe Val Asp Thr
435 440 445
Ser Asp Cys Thr Val Met Asn Ile Ala Glu His Tyr Met Ala Ser Asp
450 455 460
Val Glu Trp Asp Pro Thr Gly Arg Tyr Val Val Thr Ser Val Ser Trp
465 470 475 480
Trp Ser His Lys Val Asp Asn Ala Tyr Trp Leu Trp Thr Phe Gln Gly
485 490 495
Arg Leu Leu Gln Lys Asn Asn Lys Asp Arg Phe Cys Gln Leu Leu Trp
500 505 510
Arg Pro Arg Pro Pro Thr Leu Leu Ser Gln Glu Gln Ile Lys Gln Ile
515 520 525
Lys Lys Asp Leu Lys Lys Tyr Ser Lys Ile Phe Glu Gln Lys Asp Arg
530 535 540

Leu Ser Gln Ser Lys Ala Ser Lys Glu Leu Val Glu Arg Arg Arg Thr
545 550 555 560

Met Met Glu Asp Phe Arg Lys Tyr Arg Lys Met Ala Gln Glu Leu Tyr
565 570 575

Met Glu Gln Lys Asn Glu Arg Leu Glu Leu Arg Gly Gly Val Asp Thr
580 585 590

Asp Glu Leu Asp Ser Asn Val Asp Asp Trp Glu Glu Glu Thr Ile Glu
595 600 605

Phe Phe Val Thr Glu Glu Ile Ile Pro Leu Gly Asn Gln Glu
610 615 620

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<212> PRT
<213> Homo sapiens
<400> 152

Met Ala Gly Ser Gly Ala Gly Val Arg Cys Ser Leu Leu Arg Leu Gln
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Glu Thr Leu Ser Ala Ala Asp Arg Cys Gly Ala Ala Leu Ala Gly His
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Gln Leu Ile Arg Gly Leu Gly Gln Glu Cys Val Leu Ser Ser Ser Pro
35 40 45

Ala Val Leu Ala Leu Gln Thr Ser Leu Val Phe Ser Arg Asp Phe Gly
50 55 60

Leu Leu Val Phe Val Arg Lys Ser Leu Asn Ser Ile Glu Phe Arg Glu
65 70 75 80

Cys Arg Glu Glu Ile Leu Lys Phe Leu Cys Ile Phe Leu Glu Lys Met
85 90 95

Gly Gln Lys Ile Ala Pro Tyr Ser Val Glu Ile Lys Asn Thr Cys Thr
100 105 110

Ser Val Tyr Thr Lys Asp Arg Ala Ala Lys Cys Lys Ile Pro Ala Leu
115 120 125

Asp Leu Leu Ile Lys Leu Leu Gln Thr Phe Arg Ser Ser Arg Leu Met
130 135 140

Asp Glu Phe Lys Ile Gly Glu Leu Phe Ser Lys Phe Tyr Gly Glu Leu
145 150 155 160

Ala Leu Lys Lys Lys Ile Pro Asp Thr Val Leu Glu Lys Val Tyr Glu
165 170 175

Leu Leu Gly Leu Leu Gly Glu Val His Pro Ser Glu Met Ile Asn Asn
180 185 190

Ala Glu Asn Leu Phe Arg Ala Phe Leu Gly Glu Leu Lys Thr Gln Met
195 200 205

Thr Ser Ala Val Arg Glu Pro Lys Leu Pro Val Leu Ala Gly Cys Leu
210 215 220

Lys Gly Leu Ser Ser Leu Leu Cys Asn Phe Thr Lys Ser Met Glu Glu
225 230 235 240

Asp Pro Gln Thr Ser Arg Glu Ile Phe Asn Phe Val Leu Lys Ala Ile
245 250 255

Arg Pro Gln Ile Asp Leu Lys Arg Tyr Ala Val Pro Ser Ala Gly Leu
260 265 270

Arg Leu Phe Ala Leu His Ala Ser Gln Phe Ser Thr Cys Leu Leu Asp
275 280 285

Asn Tyr Val Ser Leu Phe Glu Val Leu Leu Lys Trp Cys Ala His Thr
290 295 300

Asn Val Glu Leu Lys Lys Ala Ala Leu Ser Ala Leu Glu Ser Phe Leu
305 310 315 320

Lys Gln Val Ser Asn Met Val Ala Lys Asn Ala Glu Met His Lys Asn
325 330 335

Lys Leu Gln Tyr Phe Met Glu Gln Phe Tyr Gly Ile Ile Arg Asn Val
340 345 350

Asp Ser Asn Asn Lys Glu Leu Ser Ile Ala Ile Arg Gly Tyr Gly Leu
355 360 365

Phe Ala Gly Pro Cys Lys Val Ile Asn Ala Lys Asp Val Asp Phe Met
370 375 380

Tyr Val Glu Leu Ile Gln Arg Cys Lys Gln Met Phe Leu Thr Gln Thr
385 390 395 400

Asp Thr Gly Asp Asp Arg Val Tyr Gln Met Pro Ser Phe Leu Gln Ser
 405 410 415
 Val Ala Ser Val Leu Leu Tyr Leu Asp Thr Val Pro Glu Val Tyr Thr
 420 425 430
 Pro Val Leu Glu His Leu Val Val Met Gln Ile Asp Ser Phe Pro Gln
 435 440 445
 Tyr Ser Pro Lys Met Gln Leu Val Cys Cys Arg Ala Ile Val Lys Val
 450 455 460
 Phe Leu Ala Leu Ala Ala Lys Gly Pro Val Leu Arg Asn Cys Ile Ser
 465 470 475 480
 Thr Val Val His Gln Gly Leu Ile Arg Ile Cys Ser Lys Pro Val Val
 485 490 495
 Leu Pro Lys Gly Pro Glu Ser Glu Ser Glu Asp His Arg Ala Ser Gly
 500 505 510
 Glu Val Arg Thr Gly Lys Trp Lys Val Pro Thr Tyr Lys Asp Tyr Val
 515 520 525
 Asp Leu Phe Arg His Leu Leu Ser Ser Asp Gln Met Met Asp Ser Ile
 530 535 540
 Leu Ala Asp Glu Ala Phe Phe Ser Val Asn Ser Ser Ser Glu Ser Leu
 545 550 555 560
 Asn His Leu Leu Tyr Asp Glu Phe Val Lys Ser Val Leu Lys Ile Val
 565 570 575
 Glu Lys Leu Asp Leu Thr Leu Glu Ile Gln Thr Val Gly Glu Gln Glu
 580 585 590
 Asn Gly Asp Glu Ala Pro Gly Val Trp Met Ile Pro Thr Ser Asp Pro
 595 600 605
 Ala Ala Asn Leu His Pro Ala Lys Pro Lys Asp Phe Ser Ala Phe Ile
 610 615 620
 Asn Leu Val Glu Phe Cys Arg Glu Ile Leu Pro Glu Lys Gln Ala Glu
 625 630 635 640
 Phe Phe Glu Pro Trp Val Tyr Ser Phe Ser Tyr Glu Leu Ile Leu Gln
 645 650 655

Ser Thr Arg Leu Pro Leu Ile Ser Gly Phe Tyr Lys Leu Leu Ser Ile
660 665 670
Thr Val Arg Asn Ala Lys Lys Ile Lys Tyr Phe Glu Gly Val Ser Pro
675 680 685
Lys Ser Leu Lys His Ser Pro Glu Asp Pro Glu Lys Tyr Ser Cys Phe
690 695 700
Ala Leu Phe Val Lys Phe Gly Lys Glu Val Ala Val Lys Met Lys Gln
705 710 715 720
Tyr Lys Asp Glu Leu Leu Ala Ser Cys Leu Thr Phe Leu Leu Ser Leu
725 730 735
Pro His Asn Ile Ile Glu Leu Asp Val Arg Ala Tyr Val Pro Ala Leu
740 745 750
Gln Met Ala Phe Lys Leu Gly Leu Ser Tyr Thr Pro Leu Ala Glu Val
755 760 765
Gly Leu Asn Ala Leu Glu Glu Trp Ser Ile Tyr Ile Asp Arg His Val
770 775 780
Met Gln Pro Tyr Tyr Lys Asp Ile Leu Pro Cys Leu Asp Gly Tyr Leu
785 790 795 800
Lys Thr Ser Ala Leu Ser Asp Glu Thr Lys Asn Asn Trp Glu Val Ser
805 810 815
Ala Leu Ser Arg Ala Ala Gln Lys Gly Phe Asn Lys Val Val Leu Lys
820 825 830
His Leu Lys Lys Thr Lys Asn Leu Ser Ser Asn Glu Ala Ile Ser Leu
835 840 845
Glu Glu Ile Arg Ile Arg Val Val Gln Met Leu Gly Ser Leu Gly Gly
850 855 860
Gln Ile Asn Lys Asn Leu Leu Thr Val Thr Ser Ser Asp Glu Met Met
865 870 875 880
Lys Ser Tyr Val Ala Trp Asp Arg Glu Lys Arg Leu Ser Phe Ala Val
885 890 895
Pro Phe Arg Glu Met Lys Pro Val Ile Phe Leu Asp Val Phe Leu Pro
900 905 910

Arg Val Thr Glu Leu Ala Leu Thr Ala Ser Asp Arg Gln Thr Lys Val
 915 920 925
 Ala Ala Cys Glu Leu Leu His Ser Met Val Met Phe Met Leu Gly Lys
 930 935 940
 Ala Thr Gln Met Pro Glu Gly Gly Gln Gly Ala Pro Pro Met Tyr Gln
 945 950 955 960
 Leu Tyr Lys Arg Thr Phe Pro Val Leu Leu Arg Leu Ala Cys Asp Val
 965 970 975
 Asp Gln Val Thr Arg Gln Leu Tyr Glu Pro Leu Val Met Gln Leu Ile
 980 985 990
 His Trp Phe Thr Asn Asn Lys Lys Phe Glu Ser Gln Asp Thr Val Ala
 995 1000 1005
 Leu Leu Glu Ala Ile Leu Asp Gly Ile Val Asp Pro Val Asp Ser
 1010 1015 1020
 Thr Leu Arg Asp Phe Cys Gly Arg Cys Ile Arg Glu Phe Leu Lys
 1025 1030 1035
 Trp Ser Ile Lys Gln Ile Thr Pro Gln Gln Gln Glu Lys Ser Pro
 1040 1045 1050
 Val Asn Thr Lys Ser Leu Phe Lys Arg Leu Tyr Ser Leu Ala Leu
 1055 1060 1065
 His Pro Asn Ala Phe Lys Arg Leu Gly Ala Ser Leu Ala Phe Asn
 1070 1075 1080
 Asn Ile Tyr Arg Glu Phe Arg Glu Glu Glu Ser Leu Val Glu Gln
 1085 1090 1095
 Phe Val Phe Glu Ala Leu Val Ile Tyr Met Glu Ser Leu Ala Leu
 1100 1105 1110
 Ala His Ala Asp Glu Lys Ser Leu Gly Thr Ile Gln Gln Cys Cys
 1115 1120 1125
 Asp Ala Ile Asp His Leu Cys Arg Ile Ile Glu Lys Lys His Val
 1130 1135 1140
 Ser Leu Asn Lys Ala Lys Lys Arg Arg Leu Pro Arg Gly Phe Pro
 1145 1150 1155

Pro Ser Ala Ser Leu Cys Leu Leu Asp Leu Val Lys Trp Leu Leu
 1160 1165 1170
 Ala His Cys Gly Arg Pro Gln Thr Glu Cys Arg His Lys Ser Ile
 1175 1180 1185
 Glu Leu Phe Tyr Lys Phe Val Pro Leu Leu Pro Gly Asn Arg Ser
 1190 1195 1200
 Pro Asn Leu Trp Leu Lys Asp Val Leu Lys Glu Glu Gly Val Ser
 1205 1210 1215
 Phe Leu Ile Asn Thr Phe Glu Gly Gly Gly Cys Gly Gln Pro Ser
 1220 1225 1230
 Gly Ile Leu Ala Gln Pro Thr Leu Leu Tyr Leu Arg Gly Pro Phe
 1235 1240 1245
 Ser Leu Gln Ala Thr Leu Cys Trp Leu Asp Leu Leu Leu Ala Ala
 1250 1255 1260
 Leu Glu Cys Tyr Asn Thr Phe Ile Gly Glu Arg Thr Val Gly Ala
 1265 1270 1275
 Leu Gln Val Leu Gly Thr Glu Ala Gln Ser Ser Leu Leu Lys Ala
 1280 1285 1290
 Val Ala Phe Phe Leu Glu Ser Ile Ala Met His Asp Ile Ile Ala
 1295 1300 1305
 Ala Glu Lys Cys Phe Gly Thr Gly Ala Ala Gly Asn Arg Thr Ser
 1310 1315 1320
 Pro Gln Glu Gly Glu Arg Tyr Asn Tyr Ser Lys Cys Thr Val Val
 1325 1330 1335
 Val Arg Ile Met Glu Phe Thr Thr Thr Leu Leu Asn Thr Ser Pro
 1340 1345 1350
 Glu Gly Trp Lys Leu Leu Lys Lys Asp Leu Cys Asn Thr His Leu
 1355 1360 1365
 Met Arg Val Leu Val Gln Thr Leu Cys Glu Pro Ala Ser Ile Gly
 1370 1375 1380
 Phe Asn Ile Gly Asp Val Gln Val Met Ala His Leu Pro Asp Val
 1385 1390 1395

Cys	Val	Asn	Leu	Met	Lys	Ala	Leu	Lys	Met	Ser	Pro	Tyr	Lys	Asp
	1400					1405					1410			
Ile	Leu	Glu	Thr	His	Leu	Arg	Glu	Lys	Ile	Thr	Ala	Gln	Ser	Ile
	1415					1420					1425			
Glu	Glu	Leu	Cys	Ala	Val	Asn	Leu	Tyr	Gly	Pro	Asp	Ala	Gln	Val
	1430					1435					1440			
Asp	Arg	Ser	Arg	Leu	Ala	Ala	Val	Val	Ser	Ala	Cys	Lys	Gln	Leu
	1445					1450					1455			
His	Arg	Ala	Gly	Leu	Leu	His	Asn	Ile	Leu	Pro	Ser	Gln	Ser	Thr
	1460					1465					1470			
Asp	Leu	His	His	Ser	Val	Gly	Thr	Glu	Leu	Leu	Ser	Leu	Val	Tyr
	1475					1480					1485			
Lys	Gly	Ile	Ala	Pro	Gly	Asp	Glu	Arg	Gln	Cys	Leu	Pro	Ser	Leu
	1490					1495					1500			
Asp	Leu	Ser	Cys	Lys	Gln	Leu	Ala	Ser	Gly	Leu	Leu	Glu	Leu	Ala
	1505					1510					1515			
Phe	Ala	Phe	Gly	Gly	Leu	Cys	Glu	Arg	Leu	Val	Ser	Leu	Leu	Leu
	1520					1525					1530			
Asn	Pro	Ala	Val	Leu	Ser	Thr	Ala	Ser	Leu	Gly	Ser	Ser	Gln	Gly
	1535					1540					1545			
Ser	Val	Ile	His	Phe	Ser	His	Gly	Glu	Tyr	Phe	Tyr	Ser	Leu	Phe
	1550					1555					1560			
Ser	Glu	Thr	Ile	Asn	Thr	Glu	Leu	Leu	Lys	Asn	Leu	Asp	Leu	Ala
	1565					1570					1575			
Val	Leu	Glu	Leu	Met	Gln	Ser	Ser	Val	Asp	Asn	Thr	Lys	Met	Val
	1580					1585					1590			
Ser	Ala	Val	Leu	Asn	Gly	Met	Leu	Asp	Gln	Ser	Phe	Arg	Glu	Arg
	1595					1600					1605			
Ala	Asn	Gln	Lys	His	Gln	Gly	Leu	Lys	Leu	Ala	Thr	Thr	Ile	Leu
	1610					1615					1620			
Gln	His	Trp	Lys	Lys	Cys	Asp	Ser	Trp	Trp	Ala	Lys	Asp	Ser	Pro
	1625					1630					1635			

Leu Glu Thr Lys Met Ala Val Leu Ala Leu Leu Ala Lys Ile Leu
 1640 1645 1650
 Gln Ile Asp Ser Ser Val Ser Phe Asn Thr Ser His Gly Ser Phe
 1655 1660 1665
 Pro Glu Val Phe Thr Thr Tyr Ile Ser Leu Leu Ala Asp Thr Lys
 1670 1675 1680
 Leu Asp Leu His Leu Lys Gly Gln Ala Val Thr Leu Leu Pro Phe
 1685 1690 1695
 Phe Thr Ser Leu Thr Gly Gly Ser Leu Glu Glu Leu Arg Arg Val
 1700 1705 1710
 Leu Glu Gln Leu Ile Val Ala His Phe Pro Met Gln Ser Arg Glu
 1715 1720 1725
 Phe Pro Pro Gly Thr Pro Arg Phe Asn Asn Tyr Val Asp Cys Met
 1730 1735 1740
 Lys Lys Phe Leu Asp Ala Leu Glu Leu Ser Gln Ser Pro Met Leu
 1745 1750 1755
 Leu Glu Leu Met Thr Glu Val Leu Cys Arg Glu Gln Gln His Val
 1760 1765 1770
 Met Glu Glu Leu Phe Gln Ser Ser Phe Arg Arg Ile Ala Arg Arg
 1775 1780 1785
 Gly Ser Cys Val Thr Gln Val Gly Leu Leu Glu Ser Val Tyr Glu
 1790 1795 1800
 Met Phe Arg Lys Asp Asp Pro Arg Leu Ser Phe Thr Arg Gln Ser
 1805 1810 1815
 Phe Val Asp Arg Ser Leu Leu Thr Leu Leu Trp His Cys Ser Leu
 1820 1825 1830
 Asp Ala Leu Arg Glu Phe Phe Ser Thr Ile Val Val Asp Ala Ile
 1835 1840 1845
 Asp Val Leu Lys Ser Arg Phe Thr Lys Leu Asn Glu Ser Thr Phe
 1850 1855 1860
 Asp Thr Gln Ile Thr Lys Lys Met Gly Tyr Tyr Lys Ile Leu Asp
 1865 1870 1875

Val	Met	Tyr	Ser	Arg	Leu	Pro	Lys	Asp	Asp	Val	His	Ala	Lys	Glu
	1880					1885					1890			
Ser	Lys	Ile	Asn	Gln	Val	Phe	His	Gly	Ser	Cys	Ile	Thr	Glu	Gly
	1895					1900					1905			
Asn	Glu	Leu	Thr	Lys	Thr	Leu	Ile	Lys	Leu	Cys	Tyr	Asp	Ala	Phe
	1910					1915					1920			
Thr	Glu	Asn	Met	Ala	Gly	Glu	Asn	Gln	Leu	Leu	Glu	Arg	Arg	Arg
	1925					1930					1935			
Leu	Tyr	His	Cys	Ala	Ala	Tyr	Asn	Cys	Ala	Ile	Ser	Val	Ile	Cys
	1940					1945					1950			
Cys	Val	Phe	Asn	Glu	Leu	Lys	Phe	Tyr	Gln	Gly	Phe	Leu	Phe	Ser
	1955					1960					1965			
Glu	Lys	Pro	Glu	Lys	Asn	Leu	Leu	Ile	Phe	Glu	Asn	Leu	Ile	Asp
	1970					1975					1980			
Leu	Lys	Arg	Arg	Tyr	Asn	Phe	Pro	Val	Glu	Val	Glu	Val	Pro	Met
	1985					1990					1995			
Glu	Arg	Lys	Lys	Lys	Tyr	Ile	Glu	Ile	Arg	Lys	Glu	Ala	Arg	Glu
	2000					2005					2010			
Ala	Ala	Asn	Gly	Asp	Ser	Asp	Gly	Pro	Ser	Tyr	Met	Ser	Ser	Leu
	2015					2020					2025			
Ser	Tyr	Leu	Ala	Asp	Ser	Thr	Leu	Ser	Glu	Glu	Met	Ser	Gln	Phe
	2030					2035					2040			
Asp	Phe	Ser	Thr	Gly	Val	Gln	Ser	Tyr	Ser	Tyr	Ser	Ser	Gln	Asp
	2045					2050					2055			
Pro	Arg	Pro	Ala	Thr	Gly	Arg	Phe	Arg	Arg	Arg	Glu	Gln	Arg	Asp
	2060					2065					2070			
Pro	Thr	Val	His	Asp	Asp	Val	Leu	Glu	Leu	Glu	Met	Asp	Glu	Leu
	2075					2080					2085			
Asn	Arg	His	Glu	Cys	Met	Ala	Pro	Leu	Thr	Ala	Leu	Val	Lys	His
	2090					2095					2100			
Met	His	Arg	Ser	Leu	Gly	Pro	Pro	Gln	Gly	Glu	Glu	Asp	Ser	Val
	2105					2110					2115			

Pro Arg Asp Leu Pro Ser Trp Met Lys Phe Leu His Gly Lys Leu
 2120 2125 2130
 Gly Asn Pro Ile Val Pro Leu Asn Ile Arg Leu Phe Leu Ala Lys
 2135 2140 2145
 Leu Val Ile Asn Thr Glu Glu Val Phe Arg Pro Tyr Ala Lys His
 2150 2155 2160
 Trp Leu Ser Pro Leu Leu Gln Leu Ala Ala Ser Glu Asn Asn Gly
 2165 2170 2175
 Gly Glu Gly Ile His Tyr Met Val Val Glu Ile Val Ala Thr Ile
 2180 2185 2190
 Leu Ser Trp Thr Gly Leu Ala Thr Pro Thr Gly Val Pro Lys Asp
 2195 2200 2205
 Glu Val Leu Ala Asn Arg Leu Leu Asn Phe Leu Met Lys His Val
 2210 2215 2220
 Phe His Pro Lys Arg Ala Val Phe Arg His Asn Leu Glu Ile Ile
 2225 2230 2235
 Lys Thr Leu Val Glu Cys Trp Lys Asp Cys Leu Ser Ile Pro Tyr
 2240 2245 2250
 Arg Leu Ile Phe Glu Lys Phe Ser Gly Lys Asp Pro Asn Ser Lys
 2255 2260 2265
 Asp Asn Ser Val Gly Ile Gln Leu Leu Gly Ile Val Met Ala Asn
 2270 2275 2280
 Asp Leu Pro Pro Tyr Asp Pro Gln Cys Gly Ile Gln Ser Ser Glu
 2285 2290 2295
 Tyr Phe Gln Ala Leu Val Asn Asn Met Ser Phe Val Arg Tyr Lys
 2300 2305 2310
 Glu Val Tyr Ala Ala Ala Ala Glu Val Leu Gly Leu Ile Leu Arg
 2315 2320 2325
 Tyr Val Met Glu Arg Lys Asn Ile Leu Glu Glu Ser Leu Cys Glu
 2330 2335 2340
 Leu Val Ala Lys Gln Leu Lys Gln His Gln Asn Thr Met Glu Asp
 2345 2350 2355

Lys	Phe	Ile	Val	Cys	Leu	Asn	Lys	Val	Thr	Lys	Ser	Phe	Pro	Pro
	2360					2365					2370			
Leu	Ala	Asp	Arg	Phe	Met	Asn	Ala	Val	Phe	Phe	Leu	Leu	Pro	Lys
	2375					2380					2385			
Phe	His	Gly	Val	Leu	Lys	Thr	Leu	Cys	Leu	Glu	Val	Val	Leu	Cys
	2390					2395					2400			
Arg	Val	Glu	Gly	Met	Thr	Glu	Leu	Tyr	Phe	Gln	Leu	Lys	Ser	Lys
	2405					2410					2415			
Asp	Phe	Val	Gln	Val	Met	Arg	His	Arg	Asp	Asp	Glu	Arg	Gln	Lys
	2420					2425					2430			
Val	Cys	Leu	Asp	Ile	Ile	Tyr	Lys	Met	Met	Pro	Lys	Leu	Lys	Pro
	2435					2440					2445			
Val	Glu	Leu	Arg	Glu	Leu	Leu	Asn	Pro	Val	Val	Glu	Phe	Val	Ser
	2450					2455					2460			
His	Pro	Ser	Thr	Thr	Cys	Arg	Glu	Gln	Met	Tyr	Asn	Ile	Leu	Met
	2465					2470					2475			
Trp	Ile	His	Asp	Asn	Tyr	Arg	Asp	Pro	Glu	Ser	Glu	Thr	Asp	Asn
	2480					2485					2490			
Asp	Ser	Gln	Glu	Ile	Phe	Lys	Leu	Ala	Lys	Asp	Val	Leu	Ile	Gln
	2495					2500					2505			
Gly	Leu	Ile	Asp	Glu	Asn	Pro	Gly	Leu	Gln	Leu	Ile	Ile	Arg	Asn
	2510					2515					2520			
Phe	Trp	Ser	His	Glu	Thr	Arg	Leu	Pro	Ser	Asn	Thr	Leu	Asp	Arg
	2525					2530					2535			
Leu	Leu	Ala	Leu	Asn	Ser	Leu	Tyr	Ser	Pro	Lys	Ile	Glu	Val	His
	2540					2545					2550			
Phe	Leu	Ser	Leu	Ala	Thr	Asn	Phe	Leu	Leu	Glu	Met	Thr	Ser	Met
	2555					2560					2565			
Ser	Pro	Asp	Tyr	Pro	Asn	Pro	Met	Phe	Glu	His	Pro	Leu	Ser	Glu
	2570					2575					2580			
Cys	Glu	Phe	Gln	Glu	Tyr	Thr	Ile	Asp	Ser	Asp	Trp	Arg	Phe	Arg
	2585					2590					2595			

Ser Thr Val Leu Thr Pro Met Phe Val Glu Thr Gln Ala Ser Gln
 2600 2605 2610
 Gly Thr Leu Gln Thr Arg Thr Gln Glu Gly Ser Leu Ser Ala Arg
 2615 2620 2625
 Trp Pro Val Ala Gly Gln Ile Arg Ala Thr Gln Gln Gln His Asp
 2630 2635 2640
 Phe Thr Leu Thr Gln Thr Ala Asp Gly Arg Ser Ser Phe Asp Trp
 2645 2650 2655
 Leu Thr Gly Ser Ser Thr Asp Pro Leu Val Asp His Thr Ser Pro
 2660 2665 2670
 Ser Ser Asp Ser Leu Leu Phe Ala His Lys Arg Ser Glu Arg Leu
 2675 2680 2685
 Gln Arg Ala Pro Leu Lys Ser Val Gly Pro Asp Phe Gly Lys Lys
 2690 2695 2700
 Arg Leu Gly Leu Pro Gly Asp Glu Val Asp Asn Lys Val Lys Gly
 2705 2710 2715
 Ala Ala Gly Arg Thr Asp Leu Leu Arg Leu Arg Arg Arg Phe Met
 2720 2725 2730
 Arg Asp Gln Glu Lys Leu Ser Leu Met Tyr Ala Arg Lys Gly Val
 2735 2740 2745
 Ala Glu Gln Lys Arg Glu Lys Glu Ile Lys Ser Glu Leu Lys Met
 2750 2755 2760
 Lys Gln Asp Ala Gln Val Val Leu Tyr Arg Ser Tyr Arg His Gly
 2765 2770 2775
 Asp Leu Pro Asp Ile Gln Ile Lys His Ser Ser Leu Ile Thr Pro
 2780 2785 2790
 Leu Gln Ala Val Ala Gln Arg Asp Pro Ile Ile Ala Lys Gln Leu
 2795 2800 2805
 Phe Ser Ser Leu Phe Ser Gly Ile Leu Lys Glu Met Asp Lys Phe
 2810 2815 2820
 Lys Thr Leu Ser Glu Lys Asn Asn Ile Thr Gln Lys Leu Leu Gln
 2825 2830 2835

Asp	Phe	Asn	Arg	Phe	Leu	Asn	Thr	Thr	Phe	Ser	Phe	Phe	Pro	Pro
	2840					2845					2850			
Phe	Val	Ser	Cys	Ile	Gln	Asp	Ile	Ser	Cys	Gln	His	Ala	Ala	Leu
	2855					2860					2865			
Leu	Ser	Leu	Asp	Pro	Ala	Ala	Val	Ser	Ala	Gly	Cys	Leu	Ala	Ser
	2870					2875					2880			
Leu	Gln	Gln	Pro	Val	Gly	Ile	Arg	Leu	Leu	Glu	Glu	Ala	Leu	Leu
	2885					2890					2895			
Arg	Leu	Leu	Pro	Ala	Glu	Leu	Pro	Ala	Lys	Arg	Val	Arg	Gly	Lys
	2900					2905					2910			
Ala	Arg	Leu	Pro	Pro	Asp	Val	Leu	Arg	Trp	Val	Glu	Leu	Ala	Lys
	2915					2920					2925			
Leu	Tyr	Arg	Ser	Ile	Gly	Glu	Tyr	Asp	Val	Leu	Arg	Gly	Ile	Phe
	2930					2935					2940			
Thr	Ser	Glu	Ile	Gly	Thr	Lys	Gln	Ile	Thr	Gln	Ser	Ala	Leu	Leu
	2945					2950					2955			
Ala	Glu	Ala	Arg	Ser	Asp	Tyr	Ser	Glu	Ala	Ala	Lys	Gln	Tyr	Asp
	2960					2965					2970			
Glu	Ala	Leu	Asn	Lys	Gln	Asp	Trp	Val	Asp	Gly	Glu	Pro	Thr	Glu
	2975					2980					2985			
Ala	Glu	Lys	Asp	Phe	Trp	Glu	Leu	Ala	Ser	Leu	Asp	Cys	Tyr	Asn
	2990					2995					3000			
His	Leu	Ala	Glu	Trp	Lys	Ser	Leu	Glu	Tyr	Cys	Ser	Thr	Ala	Ser
	3005					3010					3015			
Ile	Asp	Ser	Glu	Asn	Pro	Pro	Asp	Leu	Asn	Lys	Ile	Trp	Ser	Glu
	3020					3025					3030			
Pro	Phe	Tyr	Gln	Glu	Thr	Tyr	Leu	Pro	Tyr	Met	Ile	Arg	Ser	Lys
	3035					3040					3045			
Leu	Lys	Leu	Leu	Leu	Gln	Gly	Glu	Ala	Asp	Gln	Ser	Leu	Leu	Thr
	3050					3055					3060			
Phe	Ile	Asp	Lys	Ala	Met	His	Gly	Glu	Leu	Gln	Lys	Ala	Ile	Leu
	3065					3070					3075			

Glu Leu His Tyr Ser Gln Glu Leu Ser Leu Leu Tyr Leu Leu Gln
 3080 3085 3090
 Asp Asp Val Asp Arg Ala Lys Tyr Tyr Ile Gln Asn Gly Ile Gln
 3095 3100 3105
 Ser Phe Met Gln Asn Tyr Ser Ser Ile Asp Val Leu Leu His Gln
 3110 3115 3120
 Ser Arg Leu Thr Lys Leu Gln Ser Val Gln Ala Leu Thr Glu Ile
 3125 3130 3135
 Gln Glu Phe Ile Ser Phe Ile Ser Lys Gln Gly Asn Leu Ser Ser
 3140 3145 3150
 Gln Val Pro Leu Lys Arg Leu Leu Asn Thr Trp Thr Asn Arg Tyr
 3155 3160 3165
 Pro Asp Ala Lys Met Asp Pro Met Asn Ile Trp Asp Asp Ile Ile
 3170 3175 3180
 Thr Asn Arg Cys Phe Phe Leu Ser Lys Ile Glu Glu Lys Leu Thr
 3185 3190 3195
 Pro Leu Pro Glu Asp Asn Ser Met Asn Val Asp Gln Asp Gly Asp
 3200 3205 3210
 Pro Ser Asp Arg Met Glu Val Gln Glu Gln Glu Glu Asp Ile Ser
 3215 3220 3225
 Ser Leu Ile Arg Ser Cys Lys Phe Ser Met Lys Met Lys Met Ile
 3230 3235 3240
 Asp Ser Ala Arg Lys Gln Asn Asn Phe Ser Leu Ala Met Lys Leu
 3245 3250 3255
 Leu Lys Glu Leu His Lys Glu Ser Lys Thr Arg Asp Asp Trp Leu
 3260 3265 3270
 Val Ser Trp Val Gln Ser Tyr Cys Arg Leu Ser His Cys Arg Ser
 3275 3280 3285
 Arg Ser Gln Gly Cys Ser Glu Gln Val Leu Thr Val Leu Lys Thr
 3290 3295 3300
 Val Ser Leu Leu Asp Glu Asn Asn Val Ser Ser Tyr Leu Ser Lys
 3305 3310 3315

Asn Ile Leu Ala Phe Arg Asp Gln Asn Ile Leu Leu Gly Thr Thr
 3320 3325 3330
 Tyr Arg Ile Ile Ala Asn Ala Leu Ser Ser Glu Pro Ala Cys Leu
 3335 3340 3345
 Ala Glu Ile Glu Glu Asp Lys Ala Arg Arg Ile Leu Glu Leu Ser
 3350 3355 3360
 Gly Ser Ser Ser Glu Asp Ser Glu Lys Val Ile Ala Gly Leu Tyr
 3365 3370 3375
 Gln Arg Ala Phe Gln His Leu Ser Glu Ala Val Gln Ala Ala Glu
 3380 3385 3390
 Glu Glu Ala Gln Pro Pro Ser Trp Ser Cys Gly Pro Ala Ala Gly
 3395 3400 3405
 Val Ile Asp Ala Tyr Met Thr Leu Ala Asp Phe Cys Asp Gln Gln
 3410 3415 3420
 Leu Arg Lys Glu Glu Glu Asn Ala Ser Val Ile Asp Ser Ala Glu
 3425 3430 3435
 Leu Gln Ala Tyr Pro Ala Leu Val Val Glu Lys Met Leu Lys Ala
 3440 3445 3450
 Leu Lys Leu Asn Ser Asn Glu Ala Arg Leu Lys Phe Pro Arg Leu
 3455 3460 3465
 Leu Gln Ile Ile Glu Arg Tyr Pro Glu Glu Thr Leu Ser Leu Met
 3470 3475 3480
 Thr Lys Glu Ile Ser Ser Val Pro Cys Trp Gln Phe Ile Ser Trp
 3485 3490 3495
 Ile Ser His Met Val Ala Leu Leu Asp Lys Asp Gln Ala Val Ala
 3500 3505 3510
 Val Gln His Ser Val Glu Glu Ile Thr Asp Asn Tyr Pro Gln Ala
 3515 3520 3525
 Ile Val Tyr Pro Phe Ile Ile Ser Ser Glu Ser Tyr Ser Phe Lys
 3530 3535 3540
 Asp Thr Ser Thr Gly His Lys Asn Lys Glu Phe Val Ala Arg Ile
 3545 3550 3555

Lys	Ser	Lys	Leu	Asp	Gln	Gly	Gly	Val	Ile	Gln	Asp	Phe	Ile	Asn
	3560					3565					3570			
Ala	Leu	Asp	Gln	Leu	Ser	Asn	Pro	Glu	Leu	Leu	Phe	Lys	Asp	Trp
	3575					3580					3585			
Ser	Asn	Asp	Val	Arg	Ala	Glu	Leu	Ala	Lys	Thr	Pro	Val	Asn	Lys
	3590					3595					3600			
Lys	Asn	Ile	Glu	Lys	Met	Tyr	Glu	Arg	Met	Tyr	Ala	Ala	Leu	Gly
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Asp	Pro	Lys	Ala	Pro	Gly	Leu	Gly	Ala	Phe	Arg	Arg	Lys	Phe	Ile
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Gln	Thr	Phe	Gly	Lys	Glu	Phe	Asp	Lys	His	Phe	Gly	Lys	Gly	Gly
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Ser	Lys	Leu	Leu	Arg	Met	Lys	Leu	Ser	Asp	Phe	Asn	Asp	Ile	Thr
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Asn	Met	Leu	Leu	Leu	Lys	Met	Asn	Lys	Asp	Ser	Lys	Pro	Pro	Gly
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Phe	Leu	Arg	Asn	Glu	Leu	Glu	Ile	Pro	Gly	Gln	Tyr	Asp	Gly	Arg
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Gly	Lys	Pro	Leu	Pro	Glu	Tyr	His	Val	Arg	Ile	Ala	Gly	Phe	Asp
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Glu	Arg	Val	Thr	Val	Met	Ala	Ser	Leu	Arg	Arg	Pro	Lys	Arg	Ile
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Ile	Ile	Arg	Gly	His	Asp	Glu	Arg	Glu	His	Pro	Phe	Leu	Val	Lys
	3740					3745					3750			
Gly	Gly	Glu	Asp	Leu	Arg	Gln	Asp	Gln	Arg	Val	Glu	Gln	Leu	Phe
	3755					3760					3765			
Gln	Val	Met	Asn	Gly	Ile	Leu	Ala	Gln	Asp	Ser	Ala	Cys	Ser	Gln
	3770					3775					3780			
Arg	Ala	Leu	Gln	Leu	Arg	Thr	Tyr	Ser	Val	Val	Pro	Met	Thr	Ser
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Arg Leu Gly Leu Ile Glu Trp Leu Glu Asn Thr Val Thr Leu Lys
 3800 3805 3810
 Asp Leu Leu Leu Asn Thr Met Ser Gln Glu Glu Lys Ala Ala Tyr
 3815 3820 3825
 Leu Ser Asp Pro Arg Ala Pro Pro Cys Glu Tyr Lys Asp Trp Leu
 3830 3835 3840
 Thr Lys Met Ser Gly Lys His Asp Val Gly Ala Tyr Met Leu Met
 3845 3850 3855
 Tyr Lys Gly Ala Asn Arg Thr Glu Thr Val Thr Ser Phe Arg Lys
 3860 3865 3870
 Arg Glu Ser Lys Val Pro Ala Asp Leu Leu Lys Arg Ala Phe Val
 3875 3880 3885
 Arg Met Ser Thr Ser Pro Glu Ala Phe Leu Ala Leu Arg Ser His
 3890 3895 3900
 Phe Ala Ser Ser His Ala Leu Ile Cys Ile Ser His Trp Ile Leu
 3905 3910 3915
 Gly Ile Gly Asp Arg His Leu Asn Asn Phe Met Val Ala Met Glu
 3920 3925 3930
 Thr Gly Gly Val Ile Gly Ile Asp Phe Gly His Ala Phe Gly Ser
 3935 3940 3945
 Ala Thr Gln Phe Leu Pro Val Pro Glu Leu Met Pro Phe Arg Leu
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 Thr Arg Gln Phe Ile Asn Leu Met Leu Pro Met Lys Glu Thr Gly
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 Leu Met Tyr Ser Ile Met Val His Ala Leu Arg Ala Phe Arg Ser
 3980 3985 3990
 Asp Pro Gly Leu Leu Thr Asn Thr Met Asp Val Phe Val Lys Glu
 3995 4000 4005
 Pro Ser Phe Asp Trp Lys Asn Phe Glu Gln Lys Met Leu Lys Lys
 4010 4015 4020
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Tyr Pro Arg Gln Lys Ile Cys Tyr Ala Lys Arg Lys Leu Ala Gly
4040 4045 4050

Ala Asn Pro Ala Val Ile Thr Cys Asp Glu Leu Leu Leu Gly His
4055 4060 4065

Glu Lys Ala Pro Ala Phe Arg Asp Tyr Val Ala Val Ala Arg Gly
4070 4075 4080

Ser Lys Asp His Asn Ile Arg Ala Gln Glu Pro Glu Ser Gly Leu
4085 4090 4095

Ser Glu Glu Thr Gln Val Lys Cys Leu Met Asp Gln Ala Thr Asp
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<213> Homo sapiens

<400> 153

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35 40 45

Gln Lys Glu Val Leu Pro Ser Met Arg Lys Ile Val Ala Thr Trp Met
50 55 60

Leu Glu Val Cys Glu Glu Gln Lys Cys Glu Glu Glu Val Phe Pro Leu
65 70 75 80

Ala Met Asn Tyr Leu Asp Arg Phe Leu Ser Leu Glu Pro Val Lys Lys
85 90 95

Ser Arg Leu Gln Leu Leu Gly Ala Thr Cys Met Phe Val Ala Ser Lys
100 105 110

Met Lys Glu Thr Ile Pro Leu Thr Ala Glu Lys Leu Cys Ile Tyr Thr
115 120 125

Asp Asn Ser Ile Arg Pro Glu Leu Leu Gln Met Glu Leu Leu Leu
130 135 140

Val Asn Lys Leu Lys Trp Asn Leu Ala Ala Met Thr Pro His Asp Phe
145 150 155 160

Ile Glu His Phe Leu Ser Lys Met Pro Glu Ala Glu Glu Asn Lys Gln
165 170 175

Ile Ile Arg Lys His Ala Gln Thr Phe Val Ala Leu Cys Ala Thr Asp
180 185 190

Val Lys Phe Ile Ser Asn Pro Pro Ser Met Val Ala Ala Gly Ser Val
195 200 205

Val Ala Ala Val Gln Gly Leu Asn Leu Arg Ser Pro Asn Asn Phe Leu
210 215 220

Ser Tyr Tyr Arg Leu Thr Arg Phe Leu Ser Arg Val Ile Lys Cys Asp
225 230 235 240

Pro Asp Cys Leu Arg Ala Cys Gln Glu Gln Ile Glu Ala Leu Leu Glu
245 250 255

Ser Ser Leu Arg Gln Ala Gln Gln Asn Met Asp Pro Lys Ala Ala Glu
260 265 270

Glu Glu Glu Glu Glu Glu Glu Glu Val Asp Leu Ala Cys Thr Pro Thr
275 280 285

Asp Val Arg Asp Val Asp Ile
290 295

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Arg Arg Gly Leu Asp Thr Arg Gly Leu Lys Thr Glu Leu Ala Glu Arg
20 25 30

Leu Gln Ala Ala Leu Glu Ala Glu Glu Pro Asp Asp Glu Arg Glu Leu
35 40 45

Asp Ala Asp Asp Glu Pro Gly Arg Pro Gly His Ile Asn Glu Glu Val

50

55

60

Glu Thr Glu Gly Gly Ser Glu Leu Glu Gly Thr Ala Gln Pro Pro Pro
65 70 75 80

Pro Gly Leu Gln Pro His Ala Glu Pro Gly Gly Tyr Ser Gly Pro Asp
85 90 95

Gly His Tyr Ala Met Asp Asn Ile Thr Arg Gln Asn Gln Phe Tyr Asp
100 105 110

Thr Gln Val Ile Lys Gln Glu Asn Glu Ser Gly Tyr Glu Arg Arg Pro
115 120 125

Leu Glu Met Glu Gln Gln Gln Ala Tyr Arg Pro Glu Met Lys Thr Glu
130 135 140

Met Lys Gln Gly Ala Pro Thr Ser Phe Leu Pro Pro Glu Ala Ser Gln
145 150 155 160

Leu Lys Pro Asp Arg Gln Gln Phe Gln Ser Arg Lys Arg Pro Tyr Glu
165 170 175

Glu Asn Arg Gly Arg Gly Tyr Phe Glu His Arg Glu Asp Arg Arg Gly
180 185 190

Arg Ser Pro Gln Pro Pro Ala Glu Glu Asp Glu Asp Asp Phe Asp Asp
195 200 205

Thr Leu Val Ala Ile Asp Thr Tyr Asn Cys Asp Leu His Phe Lys Val
210 215 220

Ala Arg Asp Arg Ser Ser Gly Tyr Pro Leu Thr Ile Glu Gly Phe Ala
225 230 235 240

Tyr Leu Trp Ser Gly Ala Arg Ala Ser Tyr Gly Val Arg Arg Gly Arg
245 250 255

Val Cys Phe Glu Met Lys Ile Asn Glu Glu Ile Ser Val Lys His Leu
260 265 270

Pro Ser Thr Glu Pro Asp Pro His Val Val Arg Ile Gly Trp Ser Leu
275 280 285

Asp Ser Cys Ser Thr Gln Leu Gly Glu Glu Pro Phe Ser Tyr Gly Tyr
290 295 300

Gly Gly Thr Gly Lys Lys Ser Thr Asn Ser Arg Phe Glu Asn Tyr Gly
Page 421

305					310					315					320				
Asp	Lys	Phe	Ala	Glu 325	Asn	Asp	Val	Ile	Gly 330	Cys	Phe	Ala	Asp	Phe 335	Glu				
Cys	Gly	Asn	Asp 340	Val	Glu	Leu	Ser	Phe 345	Thr	Lys	Asn	Gly	Lys 350	Trp	Met				
Gly	Ile	Ala 355	Phe	Arg	Ile	Gln	Lys 360	Glu	Ala	Leu	Gly	Gly 365	Gln	Ala	Leu				
Tyr	Pro 370	His	Val	Leu	Val	Lys 375	Asn	Cys	Ala	Val	Glu 380	Phe	Asn	Phe	Gly				
Gln	Arg	Ala	Glu	Pro	Tyr 390	Cys	Ser	Val	Leu	Pro 395	Gly	Phe	Thr	Phe	Ile 400				
Gln	His	Leu	Pro	Leu 405	Ser	Glu	Arg	Ile	Arg 410	Gly	Thr	Val	Gly	Pro 415	Lys				
Ser	Lys	Ala	Glu 420	Cys	Glu	Ile	Leu	Met 425	Met	Val	Gly	Leu	Pro 430	Ala	Ala				
Gly	Lys	Thr 435	Thr	Trp	Ala	Ile	Lys 440	His	Ala	Ala	Ser	Asn 445	Pro	Ser	Lys				
Lys	Tyr 450	Asn	Ile	Leu	Gly	Thr 455	Asn	Ala	Ile	Met	Asp 460	Lys	Met	Arg	Val				
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Ile	Gln	Gln	Ala	Thr 485	Gln	Cys	Leu	Asn	Arg 490	Leu	Ile	Gln	Ile	Ala 495	Ala				
Arg	Lys	Lys	Arg 500	Asn	Tyr	Ile	Leu	Asp 505	Gln	Thr	Asn	Val	Tyr 510	Gly	Ser				
Ala	Gln	Arg 515	Arg	Lys	Met	Arg	Pro 520	Phe	Glu	Gly	Phe	Gln 525	Arg	Lys	Ala				
Ile	Val 530	Ile	Cys	Pro	Thr	Asp 535	Glu	Asp	Leu	Lys	Asp 540	Arg	Thr	Ile	Lys				
Arg 545	Thr	Asp	Glu	Glu	Gly 550	Lys	Asp	Val	Pro	Asp 555	His	Ala	Val	Leu	Glu 560				
Met	Lys	Ala	Asn	Phe	Thr	Leu	Pro	Asp	Val	Gly	Asp	Phe	Leu	Asp	Glu				

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565

570

575

Val Leu Phe Ile Glu Leu Gln Arg Glu Glu Ala Asp Lys Leu Val Arg
580 585 590

Gln Tyr Asn Glu Glu Gly Arg Lys Ala Gly Pro Pro Pro Glu Lys Arg
595 600 605

Phe Asp Asn Arg Gly Gly Gly Gly Phe Arg Ala Arg Gly Gly Gly Gly
610 615 620

Ala Phe Gln Arg Tyr Glu Asn Arg Gly Pro Pro Gly Gly Asn Arg Gly
625 630 635 640

Gly Phe Gln Asn Arg Gly Gly Gly Ser Gly Gly Gly Gly Asn Tyr Arg
645 650 655

Gly Gly Phe Asn Arg Asn Gly Gly Gly Gly Tyr Ser Gln Asn Arg Trp
660 665 670

Gly Asn Asn Asn Arg Asp Asn Asn Asn Ser Asn Asn Arg Gly Ser Tyr
675 680 685

Asn Arg Ala Pro Gln Gln Gln Pro Pro Pro Gln Gln Pro Pro Pro Pro
690 695 700

Gln Pro Pro Pro Gln Gln Pro Pro Pro Pro Pro Ser Tyr Ser Pro Ala
705 710 715 720

Arg Asn Pro Pro Gly Ala Ser Thr Tyr Asn Lys Asn Ser Asn Ile Pro
725 730 735

Gly Ser Ser Ala Asn Thr Ser Thr Pro Thr Val Ser Ser Tyr Ser Pro
740 745 750

Pro Gln Pro Ser Tyr Ser Gln Pro Pro Tyr Asn Gln Gly Gly Tyr Ser
755 760 765

Gln Gly Tyr Thr Gly Pro Pro Pro Pro Pro Pro Pro Pro Ala Tyr
770 775 780

Asn Tyr Gly Ser Tyr Gly Gly Tyr Asn Pro Ala Pro Tyr Thr Pro Pro
785 790 795 800

Pro Pro Pro Thr Ala Gln Thr Tyr Pro Gln Pro Ser Tyr Asn Gln Tyr
805 810 815

Gln Gln Tyr Ala Gln Gln Trp Asn Gln Tyr Tyr Gln Asn Gln Gly Gln
Page 423

His Leu Phe Val Gln Asp Pro Gln Thr Cys Lys Cys Ser Cys Lys Asn
195 200 205

Thr Asp Ser Arg Cys Lys Ala Arg Gln Leu Glu Leu Asn Glu Arg Thr
210 215 220

Cys Arg Cys Asp Lys Pro Arg Arg
225 230

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<400> 156

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Gly Lys Gly Arg Pro Ala Ser Leu Ala Gly Ala Gln Phe Gly Gly Ser
35 40 45

Gly Leu Glu Asp Arg Pro Ser Ser Gly Ser Trp Gly Ser Gly Asp Gln
50 55 60

Ser Ser Ser Ser Phe Asp Pro Ser Arg Thr Phe Ser Glu Gly Thr His
65 70 75 80

Phe Thr Glu Ser His Ser Ser Leu Ser Ser Ser Thr Phe Leu Gly Pro
85 90 95

Gly Leu Gly Gly Lys Ser Gly Glu Arg Gly Ala Tyr Ala Ser Phe Gly
100 105 110

Arg Asp Ala Gly Val Gly Gly Leu Thr Gln Ala Gly Phe Leu Ser Gly
115 120 125

Glu Leu Ala Leu Asn Ser Pro Gly Pro Leu Ser Pro Ser Gly Met Lys
130 135 140

Gly Thr Ser Gln Tyr Tyr Pro Ser Tyr Ser Gly Ser Ser Arg Arg Arg
145 150 155 160

Ala Ala Asp Gly Ser Leu Asp Thr Gln Pro Lys Lys Val Arg Lys Val
165 170 175

Pro Pro Gly Leu Pro Ser Ser Val Tyr Pro Pro Ser Ser Gly Glu Asp
 180 185 190
 Tyr Gly Arg Asp Ala Thr Ala Tyr Pro Ser Ala Lys Thr Pro Ser Ser
 195 200 205
 Thr Tyr Pro Ala Pro Phe Tyr Val Ala Asp Gly Ser Leu His Pro Ser
 210 215 220
 Ala Glu Leu Trp Ser Pro Pro Gly Gln Ala Gly Phe Gly Pro Met Leu
 225 230 235 240
 Gly Gly Gly Ser Ser Pro Leu Pro Leu Pro Pro Gly Ser Gly Pro Val
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 Gly Ser Ser Gly Ser Ser Ser Thr Phe Gly Gly Leu His Gln His Glu
 260 265 270
 Arg Met Gly Tyr Gln Leu His Gly Ala Glu Val Asn Gly Gly Leu Pro
 275 280 285
 Ser Ala Ser Ser Phe Ser Ser Ala Pro Gly Ala Thr Tyr Gly Gly Val
 290 295 300
 Ser Ser His Thr Pro Pro Val Ser Gly Ala Asp Ser Leu Leu Gly Ser
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 Arg Gly Thr Thr Ala Gly Ser Ser Gly Asp Ala Leu Gly Lys Ala Leu
 325 330 335
 Ala Ser Ile Tyr Ser Pro Asp His Ser Ser Asn Asn Phe Ser Ser Ser
 340 345 350
 Pro Ser Thr Pro Val Gly Ser Pro Gln Gly Leu Ala Gly Thr Ser Gln
 355 360 365
 Trp Pro Arg Ala Gly Ala Pro Gly Ala Leu Ser Pro Ser Tyr Asp Gly
 370 375 380
 Gly Leu His Gly Leu Gln Ser Lys Ile Glu Asp His Leu Asp Glu Ala
 385 390 395 400
 Ile His Val Leu Arg Ser His Ala Val Gly Thr Ala Gly Asp Met His
 405 410 415
 Thr Leu Leu Pro Gly His Gly Ala Leu Ala Ser Gly Phe Thr Gly Pro
 420 425 430

Met Ser Leu Gly Gly Arg His Ala Gly Leu Val Gly Gly Ser His Pro
435 440 445

Glu Asp Gly Leu Ala Gly Ser Thr Ser Leu Met His Asn His Ala Ala
450 455 460

Leu Pro Ser Gln Pro Gly Thr Leu Pro Asp Leu Ser Arg Pro Pro Asp
465 470 475 480

Ser Tyr Ser Gly Leu Gly Arg Ala Gly Ala Thr Ala Ala Ala Ser Glu
485 490 495

Ile Lys Arg Glu Glu Lys Glu Asp Glu Glu Asn Thr Ser Ala Ala Asp
500 505 510

His Ser Glu Glu Glu Lys Lys Glu Leu Lys Ala Pro Arg Ala Arg Thr
515 520 525

Ser Pro Asp Glu Asp Glu Asp Asp Leu Leu Pro Pro Glu Gln Lys Ala
530 535 540

Glu Arg Glu Lys Glu Arg Arg Val Ala Asn Asn Ala Arg Glu Arg Leu
545 550 555 560

Arg Val Arg Asp Ile Asn Glu Ala Phe Lys Glu Leu Gly Arg Met Cys
565 570 575

Gln Leu His Leu Asn Ser Glu Lys Pro Gln Thr Lys Leu Leu Ile Leu
580 585 590

His Gln Ala Val Ser Val Ile Leu Asn Leu Glu Gln Gln Val Arg Glu
595 600 605

Arg Asn Leu Asn Pro Lys Ala Ala Cys Leu Lys Arg Arg Glu Glu Glu
610 615 620

Lys Val Ser Gly Val Val Gly Asp Pro Gln Met Val Leu Ser Ala Pro
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His Pro Gly Leu Ser Glu Ala His Asn Pro Ala Gly His Met
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<211> 284

<212> PRT

<213> Homo sapiens

<400> 157

Met Phe Asp Lys Thr Arg Leu Pro Tyr Val Ala Leu Asp Val Leu Cys
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 Val Leu Leu Ala Gly Leu Pro Phe Ala Ile Leu Thr Ser Arg His Thr
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 Pro Phe Gln Arg Gly Val Phe Cys Asn Asp Glu Ser Ile Lys Tyr Pro
 35 40 45
 Tyr Lys Glu Asp Thr Ile Pro Tyr Ala Leu Leu Gly Gly Ile Ile Ile
 50 55 60
 Pro Phe Ser Ile Ile Val Ile Ile Leu Gly Glu Thr Leu Ser Val Tyr
 65 70 75 80
 Cys Asn Leu Leu His Ser Asn Ser Phe Ile Arg Asn Asn Tyr Ile Ala
 85 90 95
 Thr Ile Tyr Lys Ala Ile Gly Thr Phe Leu Phe Gly Ala Ala Ala Ser
 100 105 110
 Gln Ser Leu Thr Asp Ile Ala Lys Tyr Ser Ile Gly Arg Leu Arg Pro
 115 120 125
 His Phe Leu Asp Val Cys Asp Pro Asp Trp Ser Lys Ile Asn Cys Ser
 130 135 140
 Asp Gly Tyr Ile Glu Tyr Tyr Ile Cys Arg Gly Asn Ala Glu Arg Val
 145 150 155 160
 Lys Glu Gly Arg Leu Ser Phe Tyr Ser Gly His Ser Ser Phe Ser Met
 165 170 175
 Tyr Cys Met Leu Phe Val Ala Leu Tyr Leu Gln Ala Arg Met Lys Gly
 180 185 190
 Asp Trp Ala Arg Leu Leu Arg Pro Thr Leu Gln Phe Gly Leu Val Ala
 195 200 205
 Val Ser Ile Tyr Val Gly Leu Ser Arg Val Ser Asp Tyr Lys His His
 210 215 220
 Trp Ser Asp Val Leu Thr Gly Leu Ile Gln Gly Ala Leu Val Ala Ile
 225 230 235 240
 Leu Val Ala Val Tyr Val Ser Asp Phe Phe Lys Glu Arg Thr Ser Phe
 245 250 255

Lys Glu Arg Lys Glu Glu Asp Ser His Thr Thr Leu His Glu Thr Pro
260 265 270

Thr Thr Gly Asn His Tyr Pro Ser Asn His Gln Pro
275 280

<210> 158
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<400> 158

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Ala Glu Pro Gly Gln Gln Gln Pro Ala Ala Glu Pro Pro Pro Ala Glu
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Gly Leu Leu Arg Pro Ala Gly Pro Gly Ala Pro Glu Ala Ala Gly Thr
35 40 45

Glu Ala Ser Ser Glu Glu Val Gly Ile Ala Glu Ala Gly Pro Glu Pro
50 55 60

Glu Val Arg Thr Glu Pro Ala Ala Glu Ala Glu Ala Ala Ser Gly Pro
65 70 75 80

Ser Glu Ser Pro Ser Pro Pro Ala Ala Glu Glu Leu Pro Gly Ser His
85 90 95

Ala Glu Pro Pro Val Pro Ala Gln Gly Glu Ala Pro Gly Glu Gln Ala
100 105 110

Arg Asp Ala Gly Ser Asp Ser Arg Ala Gln Ala Val Ser Glu Asp Ala
115 120 125

Gly Gly Asn Glu Gly Arg Ala Ala Glu Ala Glu Pro Arg Ala Leu Glu
130 135 140

Asn Gly Asp Ala Asp Glu Pro Ser Phe Ser Asp Pro Glu Asp Phe Val
145 150 155 160

Asp Asp Val Ser Glu Glu Glu Leu Leu Gly Asp Val Leu Lys Asp Arg
165 170 175

Pro Gln Glu Ala Asp Gly Ile Asp Ser Val Ile Val Val Asp Asn Val
180 185 190

Pro Gln Val Gly Pro Asp Arg Leu Glu Lys Leu Lys Asn Val Ile His
Page 429

195

200

205

Lys Ile Phe Ser Lys Phe Gly Lys Ile Thr Asn Asp Phe Tyr Pro Glu
 210 215 220

Glu Asp Gly Lys Thr Lys Gly Tyr Ile Phe Leu Glu Tyr Ala Ser Pro
 225 230 235 240

Ala His Ala Val Asp Ala Val Lys Asn Ala Asp Gly Tyr Lys Leu Asp
 245 250 255

Lys Gln His Thr Phe Arg Val Asn Leu Phe Thr Asp Phe Asp Lys Tyr
 260 265 270

Met Thr Ile Ser Asp Glu Trp Asp Ile Pro Glu Lys Gln Pro Phe Lys
 275 280 285

Asp Leu Gly Asn Leu Arg Tyr Trp Leu Glu Glu Ala Glu Cys Arg Asp
 290 295 300

Gln Tyr Ser Val Ile Phe Glu Ser Gly Asp Arg Thr Ser Ile Phe Trp
 305 310 315 320

Asn Asp Val Lys Asp Pro Val Ser Ile Glu Glu Arg Ala Arg Trp Thr
 325 330 335

Glu Thr Tyr Val Arg Trp Ser Pro Lys Gly Thr Tyr Leu Ala Thr Phe
 340 345 350

His Gln Arg Gly Ile Ala Leu Trp Gly Gly Glu Lys Phe Lys Gln Ile
 355 360 365

Gln Arg Phe Ser His Gln Gly Val Gln Leu Ile Asp Phe Ser Pro Cys
 370 375 380

Glu Arg Tyr Leu Val Thr Phe Ser Pro Leu Met Asp Thr Gln Asp Asp
 385 390 395 400

Pro Gln Ala Ile Ile Ile Trp Asp Ile Leu Thr Gly His Lys Lys Arg
 405 410 415

Gly Phe His Cys Glu Ser Ser Ala His Trp Pro Ile Phe Lys Trp Ser
 420 425 430

His Asp Gly Lys Phe Phe Ala Arg Met Thr Leu Asp Thr Leu Ser Ile
 435 440 445

Tyr Glu Thr Pro Ser Met Gly Leu Leu Asp Lys Lys Ser Leu Lys Ile
 Page 430

450

455

460

Ser Gly Ile Lys Asp Phe Ser Trp Ser Pro Gly Gly Asn Ile Ile Ala
465 470 475 480

Phe Trp Val Pro Glu Asp Lys Asp Ile Pro Ala Arg Val Thr Leu Met
485 490 495

Gln Leu Pro Thr Arg Gln Glu Ile Arg Val Arg Asn Leu Phe Asn Val
500 505 510

Val Asp Cys Lys Leu His Trp Gln Lys Asn Gly Asp Tyr Leu Cys Val
515 520 525

Lys Val Asp Arg Thr Pro Lys Gly Thr Gln Gly Val Val Thr Asn Phe
530 535 540

Glu Ile Phe Arg Met Arg Glu Lys Gln Val Pro Val Asp Val Val Glu
545 550 555 560

Met Lys Glu Thr Ile Ile Ala Phe Ala Trp Glu Pro Asn Gly Ser Lys
565 570 575

Phe Ala Val Leu His Gly Glu Ala Pro Arg Ile Ser Val Ser Phe Tyr
580 585 590

His Val Lys Asn Asn Gly Lys Ile Glu Leu Ile Lys Met Phe Asp Lys
595 600 605

Gln Gln Ala Asn Thr Ile Phe Trp Ser Pro Gln Gly Gln Phe Val Val
610 615 620

Leu Ala Gly Leu Arg Ser Met Asn Gly Ala Leu Ala Phe Val Asp Thr
625 630 635 640

Ser Asp Cys Thr Val Met Asn Ile Ala Glu His Tyr Met Ala Ser Asp
645 650 655

Val Glu Trp Asp Pro Thr Gly Arg Tyr Val Val Thr Ser Val Ser Trp
660 665 670

Trp Ser His Lys Val Asp Asn Ala Tyr Trp Leu Trp Thr Phe Gln Gly
675 680 685

Arg Leu Leu Gln Lys Asn Asn Lys Asp Arg Phe Cys Gln Leu Leu Trp
690 695 700

Arg Pro Arg Pro Pro Thr Leu Leu Ser Gln Glu Gln Ile Lys Gln Ile
Page 431

705 710 715 720

Lys Lys Asp Leu Lys Lys Tyr Ser Lys Ile Phe Glu Gln Lys Asp Arg
725 730 735

Leu Ser Gln Ser Lys Ala Ser Lys Glu Leu Val Glu Arg Arg Arg Thr
740 745 750

Met Met Glu Asp Phe Arg Lys Tyr Arg Lys Met Ala Gln Glu Leu Tyr
755 760 765

Met Glu Gln Lys Asn Glu Arg Leu Glu Leu Arg Gly Gly Val Asp Thr
770 775 780

Asp Glu Leu Asp Ser Asn Val Asp Asp Trp Glu Glu Glu Thr Ile Glu
785 790 795 800

Phe Phe Val Thr Glu Glu Ile Ile Pro Leu Gly Ile Arg Ser Asp Leu
805 810 815

Glu His Cys Ala Gln Pro Cys Val Leu Trp Ser Arg Gly Arg Pro Ala
820 825 830

Gly Ser Arg Val Thr Pro Ala Ser Ser Leu Cys Ser Leu Ala Leu Asp
835 840 845

Cys Asp Cys Ala Trp Ile Leu Pro Leu Arg His Ile Phe Val Pro Phe
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Ser Pro Trp Cys Leu Gln Trp Gly Ile
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<213> Homo sapiens

<400> 159

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Lys Glu Ile Val Gly Thr Leu Leu Gly Phe Asp Asp Phe Val Asn Met
35 40 45

Val Leu Glu Asp Val Thr Glu Phe Glu Ile Thr Pro Glu Gly Arg Arg
50 55 60

Ile Thr Lys Leu Asp Gln Ile Leu Leu Asn Gly Asn Asn Ile Thr Met
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Leu Val Pro Gly Gly Glu Gly Pro Glu Val
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<210> 160
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<212> PRT
<213> Homo sapiens

<400> 160

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20 25 30

Ile Val Thr Asn Asn Asp Gly Pro Tyr Met Ala Tyr Val Glu Val Leu
35 40 45

Gly Asp Pro Asn Leu Gln Phe Phe Ile Lys Ser Gly Asp Ala Trp Val
50 55 60

Thr Leu Ser Glu His Glu Tyr Leu Ala Lys Leu Gln Glu Ile Arg Gln
65 70 75 80

Ala Val His Ile Glu Ser Val Phe Ser Leu Asn Met Ala Phe Gln Leu
85 90 95

Glu Asn Asn Lys Tyr Glu Val Glu Thr His Ala Lys Asn Gly Ala Asn
100 105 110

Met Val Thr Phe Ile Pro Arg Asn Gly His Ile Cys Lys Met Val Tyr
115 120 125

His Lys Asn Val Arg Ile Tyr Lys Ala Thr Gly Asn Asp Thr Val Thr
130 135 140

Ser Val Val Gly Phe Phe Arg Gly Leu Arg Leu Leu Leu Ile Asn Val
145 150 155 160

Phe Ser Ile Asp Asp Asn Gly Met Met Ser Asn Arg Tyr Phe Gln His
165 170 175

Val Asp Asp Lys Tyr Val Pro Ile Ser Gln Lys Asn Tyr Glu Thr Gly
180 185 190

Ile Val Lys Leu Lys Asp Tyr Lys His Ala Tyr His Pro Val Asp Leu
 195 200 205
 Asp Ile Lys Asp Ile Asp Tyr Thr Met Phe His Leu Ala Asp Ala Thr
 210 215 220
 Tyr His Glu Pro Cys Phe Lys Ile Ile Pro Asn Thr Gly Phe Cys Ile
 225 230 235 240
 Thr Lys Leu Phe Asp Gly Asp Gln Val Leu Tyr Glu Ser Phe Asn Pro
 245 250 255
 Leu Ile His Cys Ile Asn Glu Val His Ile Tyr Asp Arg Asn Asn Gly
 260 265 270
 Ser Ile Ile Cys Leu His Leu Asn Tyr Ser Pro Pro Ser Tyr Lys Ala
 275 280 285
 Tyr Leu Val Leu Lys Asp Thr Gly Trp Glu Ala Thr Thr His Pro Leu
 290 295 300
 Leu Glu Glu Lys Ile Glu Glu Leu Gln Asp Gln Arg Ala Cys Glu Leu
 305 310 315 320
 Asp Val Asn Phe Ile Ser Asp Lys Asp Leu Tyr Val Ala Ala Leu Thr
 325 330 335
 Asn Ala Asp Leu Asn Tyr Thr Met Val Thr Pro Arg Pro His Arg Asp
 340 345 350
 Val Ile Arg Val Ser Asp Gly Ser Glu Val Leu Trp Tyr Tyr Glu Gly
 355 360 365
 Leu Asp Asn Phe Leu Val Cys Ala Trp Ile Tyr Val Ser Asp Gly Val
 370 375 380
 Ala Ser Leu Val His Leu Arg Ile Lys Asp Arg Ile Pro Ala Asn Asn
 385 390 395 400
 Asp Ile Tyr Val Leu Lys Gly Asp Leu Tyr Trp Thr Arg Ile Thr Lys
 405 410 415
 Ile Gln Phe Thr Gln Glu Ile Lys Arg Leu Val Lys Lys Ser Lys Lys
 420 425 430
 Lys Leu Ala Pro Ile Thr Glu Glu Asp Ser Asp Lys His Asp Glu Pro
 435 440 445

Pro Glu Gly Pro Gly Ala Ser Gly Leu Pro Pro Lys Ala Pro Gly Asp
 450 455 460
 Lys Glu Gly Ser Glu Gly His Lys Gly Pro Ser Lys Gly Ser Asp Ser
 465 470 475 480
 Ser Lys Glu Gly Lys Lys Pro Gly Ser Gly Lys Lys Pro Gly Pro Ala
 485 490 495
 Arg Glu His Lys Pro Ser Lys Ile Pro Thr Leu Ser Lys Lys Pro Ser
 500 505 510
 Gly Pro Lys Asp Pro Lys His Pro Arg Asp Pro Lys Glu Pro Arg Lys
 515 520 525
 Ser Lys Ser Pro Arg Thr Ala Ser Pro Thr Arg Arg Pro Ser Pro Lys
 530 535 540
 Leu Pro Gln Leu Ser Lys Leu Pro Lys Ser Thr Ser Pro Arg Ser Pro
 545 550 555 560
 Pro Pro Pro Thr Arg Pro Ser Ser Pro Glu Arg Pro Glu Gly Thr Lys
 565 570 575
 Ile Ile Lys Thr Ser Lys Pro Pro Ser Pro Lys Pro Pro Phe Asp Pro
 580 585 590
 Ser Phe Lys Glu Lys Phe Tyr Asp Asp Tyr Ser Lys Ala Ala Ser Arg
 595 600 605
 Ser Lys Glu Thr Lys Thr Thr Val Val Leu Asp Glu Ser Phe Glu Ser
 610 615 620
 Ile Leu Lys Glu Thr Leu Pro Glu Thr Pro Gly Thr Pro Phe Thr Thr
 625 630 635 640
 Pro Arg Pro Val Pro Pro Lys Arg Pro Arg Thr Pro Glu Ser Pro Phe
 645 650 655
 Glu Pro Pro Lys Asp Pro Asp Ser Pro Ser Thr Ser Pro Ser Glu Phe
 660 665 670
 Phe Thr Pro Pro Glu Ser Lys Arg Thr Arg Phe His Glu Thr Pro Ala
 675 680 685
 Asp Thr Pro Leu Pro Asp Val Thr Ala Glu Leu Phe Lys Glu Pro Asp
 690 695 700

Val Thr Ala Glu Thr Lys Ser Pro Asp Glu Ala Met Lys Arg Pro Arg
705 710 715 720

Ser Pro Ser Glu Tyr Glu Asp Thr Ser Pro Gly Asp Tyr Pro Ser Leu
725 730 735

Pro Met Lys Arg His Arg Leu Glu Arg Leu Arg Leu Thr Thr Thr Glu
740 745 750

Met Glu Thr Asp Pro Gly Arg Met Ala Lys Asp Ala Ser Gly Lys Pro
755 760 765

Val Lys Leu Lys Arg Ser Lys Ser Phe Asp Asp Leu Thr Thr Val Glu
770 775 780

Leu Ala Pro Glu Pro Lys Ala Ser Arg Ile Val Val Asp Asp Glu Gly
785 790 795 800

Thr Glu Ala Asp Asp Glu Glu Thr His Pro Pro Glu Glu Arg Gln Lys
805 810 815

Thr Glu Val Arg Arg Arg Arg Pro Pro Lys Lys Pro Ser Lys Ser Pro
820 825 830

Arg Pro Ser Lys Pro Lys Lys Pro Lys Lys Pro Asp Ser Ala Tyr Ile
835 840 845

Pro Ser Ile Leu Ala Ile Leu Val Val Ser Leu Ile Val Gly Ile Leu
850 855 860

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<213> Homo sapiens

<400> 161

Met Tyr Arg Asn Pro Gly Pro Ser Gly Pro Gln Leu Arg Asp Phe Ser
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Ser Ile Ile Gln Thr Cys Ser Gly Asn Ile Gln Arg Ile Ser Gln Ala
20 25 30

Thr Ala Gln Ile Lys Asn Leu Met Ser Gln Leu Gly Thr Lys Gln Asp
35 40 45

Ser Ser Lys Leu Gln Glu Asn Leu Gln Gln Leu Gln His Ser Thr Asn
50 55 60

Gln Leu Ala Lys Glu Thr Asn Glu Leu Leu Lys Glu Leu Gly Ser Leu
65 70 75 80

Pro Leu Pro Leu Ser Thr Ser Glu Gln Arg Gln Gln Arg Leu Gln Lys
85 90 95

Glu Arg Leu Met Asn Asp Phe Ser Ala Ala Leu Asn Asn Phe Gln Ala
100 105 110

Val Gln Arg Arg Val Ser Glu Lys Glu Lys Glu Ser Ile Ala Arg Ala
115 120 125

Arg Ala Gly Ser Arg Leu Ser Ala Glu Glu Arg Gln Arg Glu Glu Gln
130 135 140

Leu Val Ser Phe Asp Ser His Glu Glu Trp Asn Gln Met Gln Ser Gln
145 150 155 160

Glu Asp Glu Val Ala Ile Thr Glu Gln Asp Leu Glu Leu Ile Lys Glu
165 170 175

Arg Glu Thr Ala Ile Arg Gln Leu Glu Ala Asp Ile Leu Asp Val Asn
180 185 190

Gln Ile Phe Lys Asp Leu Ala Met Met Ile His Asp Gln Gly Asp Leu
195 200 205

Ile Asp Ser Ile Glu Ala Asn Val Glu Ser Ser Glu Val His Val Glu
210 215 220

Arg Ala Thr Glu Gln Leu Gln Arg Ala Ala Tyr Tyr Gln Lys Lys Ser
225 230 235 240

Arg Lys Lys Met Cys Ile Leu Val Leu Val Leu Ser Val Ile Ile Leu
245 250 255

Ile Leu Gly Leu Ile Ile Trp Leu Val Tyr Lys Thr Lys
260 265

<210> 162
<211> 513
<212> PRT
<213> Homo sapiens

<400> 162

Met Ala Ser Gly Ser Val Ala Glu Cys Leu Gln Gln Glu Thr Thr Cys
1 5 10 15

Pro Val Cys Leu Gln Tyr Phe Ala Glu Pro Met Met Leu Asp Cys Gly
Page 437

275		280		285
Glu Ser Leu Lys Gln Phe Thr Glu Lys Met Gln Ser Asp Met Glu Lys	290	295	300	
Ile Gln Glu Leu Arg Glu Ala Gln Leu Tyr Ser Val Asp Val Thr Leu	305	310	315	320
Asp Pro Asp Thr Ala Tyr Pro Ser Leu Ile Leu Ser Asp Asn Leu Arg	325	330	335	
Gln Val Arg Tyr Ser Tyr Leu Gln Gln Asp Leu Pro Asp Asn Pro Glu	340	345	350	
Arg Phe Asn Leu Phe Pro Cys Val Leu Gly Ser Pro Cys Phe Ile Ala	355	360	365	
Gly Arg His Tyr Trp Glu Val Glu Val Gly Asp Lys Ala Lys Trp Thr	370	375	380	
Ile Gly Val Cys Glu Asp Ser Val Cys Arg Lys Gly Gly Val Thr Ser	385	390	395	400
Ala Pro Gln Asn Gly Phe Trp Ala Val Ser Leu Trp Tyr Gly Lys Glu	405	410	415	
Tyr Trp Ala Leu Thr Ser Pro Met Thr Ala Leu Pro Leu Arg Thr Pro	420	425	430	
Leu Gln Arg Val Gly Ile Phe Leu Asp Tyr Asp Ala Gly Glu Val Ser	435	440	445	
Phe Tyr Asn Val Thr Glu Arg Cys His Thr Phe Thr Phe Ser His Ala	450	455	460	
Thr Phe Cys Gly Pro Val Arg Pro Tyr Phe Ser Leu Ser Tyr Ser Gly	465	470	475	480
Gly Lys Ser Ala Ala Pro Leu Ile Ile Cys Pro Met Ser Gly Ile Asp	485	490	495	
Gly Phe Ser Gly His Val Gly Asn His Gly His Ser Met Glu Thr Ser	500	505	510	

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<213> Homo sapiens

<400> 163

Met Ala Ala Arg Val Leu Ile Ile Gly Ser Gly Gly Arg Glu His Thr
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Leu Ala Trp Lys Leu Ala Gln Ser His His Val Lys Gln Val Leu Val
20 25 30

Ala Pro Gly Asn Ala Gly Thr Ala Cys Ser Glu Lys Ile Ser Asn Thr
35 40 45

Ala Ile Ser Ile Ser Asp His Thr Ala Leu Ala Gln Phe Cys Lys Glu
50 55 60

Lys Lys Ile Glu Phe Val Val Val Gly Pro Glu Ala Pro Leu Ala Ala
65 70 75 80

Gly Ile Val Gly Asn Leu Arg Ser Ala Gly Val Gln Cys Phe Gly Pro
85 90 95

Thr Ala Glu Ala Ala Gln Leu Glu Ser Ser Lys Arg Phe Ala Lys Glu
100 105 110

Phe Met Asp Arg His Gly Ile Pro Thr Ala Gln Trp Lys Ala Phe Thr
115 120 125

Lys Pro Glu Glu Ala Cys Ser Phe Ile Leu Ser Ala Asp Phe Pro Ala
130 135 140

Leu Val Val Lys Ala Ser Gly Leu Ala Ala Gly Lys Gly Val Ile Val
145 150 155 160

Ala Lys Ser Lys Glu Glu Ala Cys Lys Ala Val Gln Glu Ile Met Gln
165 170 175

Glu Lys Ala Phe Gly Ala Ala Gly Glu Thr Ile Val Ile Glu Glu Leu
180 185 190

Leu Asp Gly Glu Glu Val Ser Cys Leu Cys Phe Thr Asp Gly Lys Thr
195 200 205

Val Ala Pro Met Pro Pro Ala Gln Asp His Lys Arg Leu Leu Glu Gly
210 215 220

Asp Gly Gly Pro Asn Thr Gly Gly Met Gly Ala Tyr Cys Pro Ala Pro
225 230 235 240

Gln Val Ser Asn Asp Leu Leu Leu Lys Ile Lys Asp Thr Val Leu Gln
 245 250 255
 Arg Thr Val Asp Gly Met Gln Gln Glu Gly Thr Pro Tyr Thr Gly Ile
 260 265 270
 Leu Tyr Ala Gly Ile Met Leu Thr Lys Asn Gly Pro Lys Val Leu Glu
 275 280 285
 Phe Asn Cys Arg Phe Gly Asp Pro Glu Cys Gln Val Ile Leu Pro Leu
 290 295 300
 Leu Lys Ser Asp Leu Tyr Glu Val Ile Gln Ser Thr Leu Asp Gly Leu
 305 310 315 320
 Leu Cys Thr Ser Leu Pro Val Trp Leu Glu Asn His Thr Ala Leu Thr
 325 330 335
 Val Val Met Ala Ser Lys Gly Tyr Pro Gly Asp Tyr Thr Lys Gly Val
 340 345 350
 Glu Ile Thr Gly Phe Pro Glu Ala Gln Ala Leu Gly Leu Glu Val Phe
 355 360 365
 His Ala Gly Thr Ala Leu Lys Asn Gly Lys Val Val Thr His Gly Gly
 370 375 380
 Arg Val Leu Ala Val Thr Ala Ile Arg Glu Asn Leu Ile Ser Ala Leu
 385 390 395 400
 Glu Glu Ala Lys Lys Gly Leu Ala Ala Ile Lys Phe Glu Gly Ala Ile
 405 410 415
 Tyr Arg Lys Asp Val Gly Phe Arg Ala Ile Ala Phe Leu Gln Gln Pro
 420 425 430
 Arg Ser Leu Thr Tyr Lys Glu Ser Gly Val Asp Ile Ala Ala Gly Asn
 435 440 445
 Met Leu Val Lys Lys Ile Gln Pro Leu Ala Lys Ala Thr Ser Arg Ser
 450 455 460
 Gly Cys Lys Val Asp Leu Gly Gly Phe Ala Gly Leu Phe Asp Leu Lys
 465 470 475 480
 Ala Ala Gly Phe Lys Asp Pro Leu Leu Ala Ser Gly Thr Asp Gly Val
 485 490 495

Gly Thr Lys Leu Lys Ile Ala Gln Leu Cys Asn Lys His Asp Thr Ile
 500 505 510

Gly Gln Asp Leu Val Ala Met Cys Val Asn Asp Ile Leu Ala Gln Gly
 515 520 525

Ala Glu Pro Leu Phe Phe Leu Asp Tyr Phe Ser Cys Gly Lys Leu Asp
 530 535 540

Leu Ser Val Thr Glu Ala Val Val Ala Gly Ile Ala Lys Ala Cys Gly
 545 550 555 560

Lys Ala Gly Cys Ala Leu Leu Gly Gly Glu Thr Ala Glu Met Pro Asp
 565 570 575

Met Tyr Pro Pro Gly Glu Tyr Asp Leu Ala Gly Phe Ala Val Gly Ala
 580 585 590

Met Glu Arg Asp Gln Lys Leu Pro His Leu Glu Arg Ile Thr Glu Gly
 595 600 605

Asp Val Val Val Gly Ile Ala Ser Ser Gly Leu His Ser Asn Gly Phe
 610 615 620

Ser Leu Val Arg Lys Ile Val Ala Lys Ser Ser Leu Gln Tyr Ser Ser
 625 630 635 640

Pro Ala Pro Asp Gly Cys Gly Asp Gln Thr Leu Gly Asp Leu Leu Leu
 645 650 655

Thr Pro Thr Arg Ile Tyr Ser His Ser Leu Leu Pro Val Leu Arg Ser
 660 665 670

Gly His Val Lys Ala Phe Ala His Ile Thr Gly Gly Gly Leu Leu Glu
 675 680 685

Asn Ile Pro Arg Val Leu Pro Glu Lys Leu Gly Val Asp Leu Asp Ala
 690 695 700

Gln Thr Trp Arg Ile Pro Arg Val Phe Ser Trp Leu Gln Gln Glu Gly
 705 710 715 720

His Leu Ser Glu Glu Glu Met Ala Arg Thr Phe Asn Cys Gly Val Gly
 725 730 735

Ala Val Leu Val Val Ser Lys Glu Gln Thr Glu Gln Ile Leu Arg Asp
 740 745 750

Ile Gln Gln His Lys Glu Glu Ala Trp Val Ile Gly Ser Val Val Ala
755 760 765

Arg Ala Glu Gly Ser Pro Arg Val Lys Val Lys Asn Leu Ile Glu Ser
770 775 780

Met Gln Ile Asn Gly Ser Val Leu Lys Asn Gly Ser Leu Thr Asn His
785 790 795 800

Phe Ser Phe Glu Lys Lys Lys Ala Arg Val Ala Val Leu Ile Ser Gly
805 810 815

Thr Gly Ser Asn Leu Gln Ala Leu Ile Asp Ser Thr Arg Glu Pro Asn
820 825 830

Ser Ser Ala Gln Ile Asp Ile Val Ile Ser Asn Lys Ala Ala Val Ala
835 840 845

Gly Leu Asp Lys Ala Glu Arg Ala Gly Ile Pro Thr Arg Val Ile Asn
850 855 860

His Lys Leu Tyr Lys Asn Arg Val Glu Phe Asp Ser Ala Ile Asp Leu
865 870 875 880

Val Leu Glu Glu Phe Ser Ile Asp Ile Val Cys Leu Ala Gly Phe Met
885 890 895

Arg Ile Leu Ser Gly Pro Phe Val Gln Lys Trp Asn Gly Lys Met Leu
900 905 910

Asn Ile His Pro Ser Leu Leu Pro Ser Phe Lys Gly Ser Asn Ala His
915 920 925

Glu Gln Ala Leu Glu Thr Gly Val Thr Val Thr Gly Cys Thr Val His
930 935 940

Phe Val Ala Glu Asp Val Asp Ala Gly Gln Ile Ile Leu Gln Glu Ala
945 950 955 960

Val Pro Val Lys Arg Gly Asp Thr Val Ala Thr Leu Ser Glu Arg Val
965 970 975

Lys Leu Ala Glu His Lys Ile Phe Pro Ala Ala Leu Gln Leu Val Ala
980 985 990

Ser Gly Thr Val Gln Leu Gly Glu Asn Gly Lys Ile Cys Trp Val Lys
995 1000 1005

Glu Glu
1010

<210> 164
<211> 411
<212> PRT
<213> Homo sapiens

<400> 164

Glu Ala Gly Pro Ala Pro Leu Ser Ala Ala Ala Pro Gly Ala Gly Arg
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Gly Trp Pro Arg Pro Leu Ala Glu Arg Arg Lys Gly Arg Gly Arg Arg
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Gln Pro Leu Arg Ala Arg Leu Asn Arg Arg Arg Trp Ala Ala Gly Gln
35 40 45

Gly Ser Thr Val Gln Ala Ala Thr Phe Gly Pro Ala Met Ala Ala Ala
50 55 60

Pro Leu Lys Val Cys Ile Val Gly Ser Gly Asn Trp Gly Ser Ala Val
65 70 75 80

Ala Lys Ile Ile Gly Asn Asn Val Lys Lys Leu Gln Lys Phe Ala Ser
85 90 95

Thr Val Lys Met Trp Val Phe Glu Glu Thr Val Asn Gly Arg Lys Leu
100 105 110

Thr Asp Ile Ile Asn Asn Asp His Glu Asn Val Lys Tyr Leu Pro Gly
115 120 125

His Lys Leu Pro Glu Asn Val Val Ala Met Ser Asn Leu Ser Glu Ala
130 135 140

Val Gln Asp Ala Asp Leu Leu Val Phe Val Ile Pro His Gln Phe Ile
145 150 155 160

His Arg Ile Cys Asp Glu Ile Thr Gly Arg Val Pro Lys Lys Ala Leu
165 170 175

Gly Ile Thr Leu Ile Lys Gly Ile Asp Glu Gly Pro Glu Gly Leu Lys
180 185 190

Leu Ile Ser Asp Ile Ile Arg Glu Lys Met Gly Ile Asp Ile Ser Val
195 200 205

Leu Met Gly Ala Asn Ile Ala Asn Glu Val Ala Ala Glu Lys Phe Cys
 210 215 220

Glu Thr Thr Ile Gly Ser Lys Val Met Glu Asn Gly Leu Leu Phe Lys
 225 230 235 240

Glu Leu Leu Gln Thr Pro Asn Phe Arg Ile Thr Val Val Asp Asp Ala
 245 250 255

Asp Thr Val Glu Leu Cys Gly Ala Leu Lys Asn Ile Val Ala Val Gly
 260 265 270

Ala Gly Phe Cys Asp Gly Leu Arg Cys Gly Asp Asn Thr Lys Ala Ala
 275 280 285

Val Ile Arg Leu Gly Leu Met Glu Met Ile Ala Phe Ala Arg Ile Phe
 290 295 300

Cys Lys Gly Gln Val Ser Thr Ala Thr Phe Leu Glu Ser Cys Gly Val
 305 310 315 320

Ala Asp Leu Ile Thr Thr Cys Tyr Gly Gly Arg Asn Arg Arg Val Ala
 325 330 335

Glu Ala Phe Ala Arg Thr Gly Lys Thr Ile Glu Glu Leu Glu Lys Glu
 340 345 350

Met Leu Asn Gly Gln Lys Leu Gln Gly Pro Gln Thr Ser Ala Glu Val
 355 360 365

Tyr Arg Ile Leu Lys Gln Lys Gly Leu Leu Asp Lys Phe Pro Leu Phe
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Thr Ala Val Tyr Gln Ile Cys Tyr Glu Ser Arg Pro Val Gln Glu Met
 385 390 395 400

Leu Ser Cys Leu Gln Ser His Pro Glu His Thr
 405 410

<210> 165
 <211> 890
 <212> PRT
 <213> Homo sapiens

<400> 165

His Ala Tyr Lys Leu Ile Cys Asn Thr Met Lys Arg Arg Gln Asp Val
 1 5 10 15

Ser Pro Asn Arg Asp Phe Leu Thr His Phe Tyr Asn Ile Met His Cys
 20 25 30
 Gly Leu Leu His Ile Asp Gln Asp Ile Val Asn Thr Ile Ile Lys His
 35 40 45
 Cys Ser Pro Gln Phe Phe Ser Leu Gly Leu Pro Gly Ala Thr Met Leu
 50 55 60
 Ile Met Asp Phe Ile Val Ala Ala Gly Arg Val Ala Ser Ser Ala Phe
 65 70 75 80
 Leu Asn Ala Pro Arg Val Glu Ala Gln Val Leu Leu Gly Ser Leu Val
 85 90 95
 Cys Phe Pro Asn Leu Tyr Cys Glu Leu Pro Ser Leu His Pro Asn Ile
 100 105 110
 Pro Asp Val Ala Val Ser Gln Phe Thr Asp Val Lys Glu Leu Ile Ile
 115 120 125
 Lys Thr Val Leu Ser Ser Ala Arg Asp Glu Pro Ser Gly Pro Ala Arg
 130 135 140
 Cys Val Ala Leu Cys Ser Leu Gly Ile Trp Ile Cys Glu Glu Leu Val
 145 150 155 160
 His Glu Ser His His Pro Gln Ile Lys Glu Ala Leu Asn Val Ile Cys
 165 170 175
 Val Ser Leu Lys Phe Thr Asn Lys Thr Val Ala His Val Ala Cys Asn
 180 185 190
 Met Leu His Met Leu Val His Tyr Val Pro Arg Leu Gln Ile Tyr Gln
 195 200 205
 Pro Asp Ser Pro Leu Lys Ile Ile Gln Ile Leu Ile Ala Thr Ile Thr
 210 215 220
 His Leu Leu Pro Ser Thr Glu Ala Ser Ser Tyr Glu Met Asp Lys Arg
 225 230 235 240
 Leu Val Val Ser Leu Leu Leu Cys Leu Leu Asp Trp Ile Met Ala Leu
 245 250 255
 Pro Leu Lys Thr Leu Leu Gln Pro Phe His Ala Thr Gly Ala Glu Ser
 260 265 270

Asp Lys Thr Glu Lys Ser Val Leu Asn Cys Ile Tyr Lys Val Leu His
 275 280 285

Gly Cys Val Tyr Gly Ala Gln Cys Phe Ser Asn Pro Arg Tyr Phe Pro
 290 295 300

Met Ser Leu Ser Asp Leu Ala Ser Val Asp Tyr Asp Pro Phe Met His
 305 310 315 320

Leu Glu Ser Leu Lys Glu Pro Glu Pro Leu His Ser Pro Asp Ser Glu
 325 330 335

Arg Ser Ser Lys Leu Gln Pro Val Thr Glu Val Lys Thr Gln Met Gln
 340 345 350

His Gly Leu Ile Ser Ile Ala Ala Arg Thr Val Ile Thr His Leu Val
 355 360 365

Asn His Leu Gly His Tyr Pro Met Ser Gly Gly Pro Ala Met Leu Thr
 370 375 380

Ser Gln Val Cys Glu Asn His Asp Asn His Tyr Ser Glu Ser Thr Glu
 385 390 395 400

Leu Ser Pro Glu Leu Phe Glu Ser Pro Asn Ile Gln Phe Phe Val Leu
 405 410 415

Asn Asn Thr Thr Leu Val Ser Cys Ile Gln Ile Arg Ser Glu Glu Asn
 420 425 430

Met Pro Gly Gly Gly Leu Ser Ala Gly Leu Ala Ser Ala Asn Ser Asn
 435 440 445

Val Arg Ile Ile Val Arg Asp Leu Ser Gly Lys Tyr Ser Trp Asp Ser
 450 455 460

Ala Ile Leu Tyr Gly Pro Pro Pro Val Ser Gly Leu Ser Glu Pro Thr
 465 470 475 480

Ser Phe Met Leu Ser Leu Ser His Gln Glu Lys Pro Glu Glu Pro Pro
 485 490 495

Thr Ser Asn Glu Cys Leu Glu Asp Ile Thr Val Lys Asp Gly Leu Ser
 500 505 510

Leu Gln Phe Lys Arg Phe Arg Glu Thr Val Pro Thr Trp Asp Thr Ile
 515 520 525

Arg Asp Glu Glu Asp Val Leu Asp Glu Leu Leu Gln Tyr Leu Gly Val
 530 535 540
 Thr Ser Pro Glu Cys Leu Gln Arg Thr Gly Ile Ser Leu Asn Ile Pro
 545 550 555 560
 Ala Pro Gln Pro Val Cys Ile Ser Glu Lys Gln Glu Asn Asp Val Ile
 565 570 575
 Asn Ala Ile Leu Lys Gln His Thr Glu Glu Lys Glu Phe Val Glu Lys
 580 585 590
 His Phe Asn Asp Leu Asn Met Lys Ala Val Glu Gln Asp Glu Pro Ile
 595 600 605
 Pro Gln Lys Pro Gln Ser Ala Phe Tyr Tyr Cys Arg Leu Leu Leu Ser
 610 615 620
 Ile Leu Gly Met Asn Ser Trp Asp Lys Arg Arg Ser Phe His Leu Leu
 625 630 635 640
 Lys Lys Asn Glu Lys Leu Leu Arg Glu Leu Arg Asn Leu Asp Ser Arg
 645 650 655
 Gln Cys Arg Glu Thr His Lys Ile Ala Val Phe Tyr Val Ala Glu Gly
 660 665 670
 Gln Glu Asp Lys His Ser Ile Leu Thr Asn Thr Gly Gly Ser Gln Ala
 675 680 685
 Tyr Glu Asp Phe Val Ala Gly Leu Gly Trp Glu Val Asn Leu Thr Asn
 690 695 700
 His Cys Gly Phe Met Gly Gly Leu Gln Lys Asn Lys Ser Thr Gly Leu
 705 710 715 720
 Thr Thr Pro Tyr Phe Ala Thr Ser Thr Val Glu Val Ile Phe His Val
 725 730 735
 Ser Thr Arg Met Pro Ser Asp Ser Asp Asp Ser Leu Thr Lys Lys Leu
 740 745 750
 Arg His Leu Gly Asn Asp Glu Val His Ile Val Trp Ser Glu His Thr
 755 760 765
 Arg Asp Tyr Arg Arg Gly Ile Ile Pro Thr Glu Phe Gly Asp Val Leu
 770 775 780

Ile Val Ile Tyr Pro Met Lys Asn His Met Phe Ser Ile Gln Ile Met
785 790 795 800

Lys Lys Pro Glu Val Pro Phe Phe Gly Pro Leu Phe Asp Gly Ala Ile
805 810 815

Val Asn Gly Lys Val Leu Pro Ile Met Val Arg Ala Thr Ala Ile Asn
820 825 830

Ala Ser Arg Ala Leu Lys Ser Leu Ile Pro Leu Tyr Gln Asn Phe Tyr
835 840 845

Glu Glu Arg Ala Arg Tyr Leu Gln Thr Ile Val Gln His His Leu Glu
850 855 860

Pro Thr Thr Phe Glu Asp Phe Ala Ala Gln Val Phe Ser Pro Ala Pro
865 870 875 880

Tyr His His Leu Pro Ser Asp Ala Asp His
885 890

<210> 166
<211> 864
<212> PRT
<213> Homo sapiens

<400> 166

Gln Val Gln His Gly Ser Asn Val Asn Ile His Arg Leu Val Glu Gly
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Asn Val Val Ile Trp Glu Asn Ala Ser Thr Pro Leu Tyr Thr Gly Ala
20 25 30

Ile Val Thr Asn Asn Asp Gly Pro Tyr Met Ala Tyr Val Glu Val Leu
35 40 45

Gly Asp Pro Asn Leu Gln Phe Phe Ile Lys Ser Gly Asp Ala Trp Val
50 55 60

Thr Leu Ser Glu His Glu Tyr Leu Ala Lys Leu Gln Glu Ile Arg Gln
65 70 75 80

Ala Val His Ile Glu Ser Val Phe Ser Leu Asn Met Ala Phe Gln Leu
85 90 95

Glu Asn Asn Lys Tyr Glu Val Glu Thr His Ala Lys Asn Gly Ala Asn
100 105 110

Met Val Thr Phe Ile Pro Arg Asn Gly His Ile Cys Lys Met Val Tyr
Page 449

115

120

125

His Lys Asn Val Arg Ile Tyr Lys Ala Thr Gly Asn Asp Thr Val Thr
 130 135 140

Ser Val Val Gly Phe Phe Arg Gly Leu Arg Leu Leu Ile Asn Val
 145 150 155 160

Phe Ser Ile Asp Asp Asn Gly Met Met Ser Asn Arg Tyr Phe Gln His
 165 170 175

Val Asp Asp Lys Tyr Val Pro Ile Ser Gln Lys Asn Tyr Glu Thr Gly
 180 185 190

Ile Val Lys Leu Lys Asp Tyr Lys His Ala Tyr His Pro Val Asp Leu
 195 200 205

Asp Ile Lys Asp Ile Asp Tyr Thr Met Phe His Leu Ala Asp Ala Thr
 210 215 220

Tyr His Glu Pro Cys Phe Lys Ile Ile Pro Asn Thr Gly Phe Cys Ile
 225 230 235 240

Thr Lys Leu Phe Asp Gly Asp Gln Val Leu Tyr Glu Ser Phe Asn Pro
 245 250 255

Leu Ile His Cys Ile Asn Glu Val His Ile Tyr Asp Arg Asn Asn Gly
 260 265 270

Ser Ile Ile Cys Leu His Leu Asn Tyr Ser Pro Pro Ser Tyr Lys Ala
 275 280 285

Tyr Leu Val Leu Lys Asp Thr Gly Trp Glu Ala Thr Thr His Pro Leu
 290 295 300

Leu Glu Glu Lys Ile Glu Glu Leu Gln Asp Gln Arg Ala Cys Glu Leu
 305 310 315 320

Asp Val Asn Phe Ile Ser Asp Lys Asp Leu Tyr Val Ala Ala Leu Thr
 325 330 335

Asn Ala Asp Leu Asn Tyr Thr Met Val Thr Pro Arg Pro His Arg Asp
 340 345 350

Val Ile Arg Val Ser Asp Gly Ser Glu Val Leu Trp Tyr Tyr Glu Gly
 355 360 365

Leu Asp Asn Phe Leu Val Cys Ala Trp Ile Tyr Val Ser Asp Gly Val
 450

370

375

380

Ala Ser Leu Val His Leu Arg Ile Lys Asp Arg Ile Pro Ala Asn Asn
385 390 395 400

Asp Ile Tyr Val Leu Lys Gly Asp Leu Tyr Trp Thr Arg Ile Thr Lys
405 410 415

Ile Gln Phe Thr Gln Glu Ile Lys Arg Leu Val Lys Lys Ser Lys Lys
420 425 430

Lys Leu Ala Pro Ile Thr Glu Glu Asp Ser Asp Lys His Asp Glu Pro
435 440 445

Pro Glu Gly Pro Gly Ala Ser Gly Leu Pro Pro Lys Ala Pro Gly Asp
450 455 460

Lys Glu Gly Ser Glu Gly His Lys Gly Pro Ser Lys Gly Ser Asp Ser
465 470 475 480

Ser Lys Glu Gly Lys Lys Pro Gly Ser Gly Lys Lys Pro Gly Pro Ala
485 490 495

Arg Glu His Lys Pro Ser Lys Ile Pro Thr Leu Ser Lys Lys Pro Ser
500 505 510

Gly Pro Lys Asp Pro Lys His Pro Arg Asp Pro Lys Glu Pro Arg Lys
515 520 525

Ser Lys Ser Pro Arg Thr Ala Ser Pro Thr Arg Arg Pro Ser Pro Lys
530 535 540

Leu Pro Gln Leu Ser Lys Leu Pro Lys Ser Thr Ser Pro Arg Ser Pro
545 550 555 560

Pro Pro Pro Thr Arg Pro Ser Ser Pro Glu Arg Pro Glu Gly Thr Lys
565 570 575

Ile Ile Lys Thr Ser Lys Pro Pro Ser Pro Lys Pro Pro Phe Asp Pro
580 585 590

Ser Phe Lys Glu Lys Phe Tyr Asp Asp Tyr Ser Lys Ala Ala Ser Arg
595 600 605

Ser Lys Glu Thr Lys Thr Thr Val Val Leu Asp Glu Ser Phe Glu Ser
610 615 620

Ile Leu Lys Glu Thr Leu Pro Glu Thr Pro Gly Thr Pro Phe Thr Thr
Page 451

625		630		635		640
Pro Arg Pro Val	Pro 645	Pro Lys Arg	Pro 650	Arg Thr Pro	Glu Ser Pro	Phe 655
Glu Pro Pro	Lys 660	Asp Pro Asp	Ser 665	Pro Thr Ser	Pro 670	Glu Phe
Phe Thr Pro	Pro 675	Glu Ser Lys	Arg 680	Thr Arg Phe	His 685	Glu Thr Pro Ala
Asp Thr Pro	Leu 690	Pro Asp Val	Thr 695	Ala Glu Leu	Phe 700	Lys Glu Pro Asp
Val Thr Ala	Glu 705	Thr Lys Ser	Pro 710	Asp Glu Ala	Met 715	Lys Arg Pro Arg 720
Ser Pro Ser	Glu 725	Tyr Glu Asp	Thr 730	Ser Pro Gly	Asp Tyr Pro	Ser 735
Pro Met Lys	Arg 740	His Arg Leu	Glu 745	Arg Leu Arg	Leu Thr Thr	Thr 750
Met Glu Thr	Asp 755	Pro Gly Arg	Met 760	Ala Lys Asp	Ala Ser Gly	Lys Pro
Val Lys Leu	Lys 770	Arg Ser Lys	Ser 775	Phe Asp Asp	Leu Thr Thr	Val Glu
Leu Ala Pro	Glu 785	Pro Lys Ala	Ser 790	Arg Ile Val	Val Asp Asp	Glu Gly 800
Thr Glu Ala	Asp 805	Asp Glu Glu	Thr 810	His Pro Pro	Glu Glu Arg	Gln Lys 815
Thr Glu Val	Arg 820	Arg Arg Arg	Pro 825	Pro Lys Lys	Pro Ser Lys	Ser Pro
Arg Pro Ser	Lys 835	Pro Lys Lys	Pro 840	Lys Lys Pro	Asp Ser Ala	Tyr Ile
Pro Ser Ile	Leu 850	Ala Ile Leu	Val 855	Val Ser Leu	Ile Val Gly	Ile Leu

<210> 167
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<400> 167

Met Trp Gln Leu Trp Ala Ser Leu Cys Cys Leu Leu Val Leu Ala Asn
1 5 10 15

Ala Arg Ser Arg Pro Ser Phe His Pro Val Ser Asp Glu Leu Val Asn
20 25 30

Tyr Val Asn Lys Arg Asn Thr Thr Trp Gln Ala Gly His Asn Phe Tyr
35 40 45

Asn Val Asp Met Ser Tyr Leu Lys Arg Leu Cys Gly Thr Phe Leu Gly
50 55 60

Gly Pro Lys Pro Pro Gln Arg Val Met Phe Thr Glu Asp Leu Lys Leu
65 70 75 80

Pro Ala Ser Phe Asp Ala Arg Glu Gln Trp Pro Gln Cys Pro Thr Ile
85 90 95

Lys Glu Ile Arg Asp Gln Gly Ser Cys Gly Ser Cys Trp Ala Phe Gly
100 105 110

Ala Val Glu Ala Ile Ser Asp Arg Ile Cys Ile His Thr Asn Ala His
115 120 125

Val Ser Val Glu Val Ser Ala Glu Asp Leu Leu Thr Cys Cys Gly Ser
130 135 140

Met Cys Gly Asp Gly Cys Asn Gly Gly Tyr Pro Ala Glu Ala Trp Asn
145 150 155 160

Phe Trp Thr Arg Lys Gly Leu Val Ser Gly Gly Leu Tyr Glu Ser His
165 170 175

Val Gly Cys Arg Pro Tyr Ser Ile Pro Pro Cys Glu His His Val Asn
180 185 190

Gly Ser Arg Pro Pro Cys Thr Gly Glu Gly Asp Thr Pro Lys Cys Ser
195 200 205

Lys Ile Cys Glu Pro Gly Tyr Ser Pro Thr Tyr Lys Gln Asp Lys His
210 215 220

Tyr Gly Tyr Asn Ser Tyr Ser Val Ser Asn Ser Glu Lys Asp Ile Met
225 230 235 240

Ala Glu Ile Tyr Lys Asn Gly Pro Val Glu Gly Ala Phe Ser Val Tyr
245 250 255

Ser Asp Phe Leu Leu Tyr Lys Ser Gly Val Tyr Gln His Val Thr Gly
260 265 270

Glu Met Met Gly Gly His Ala Ile Arg Ile Leu Gly Trp Gly Val Glu
275 280 285

Asn Gly Thr Pro Tyr Trp Leu Val Ala Asn Ser Trp Asn Thr Asp Trp
290 295 300

Gly Asp Asn Gly Phe Phe Lys Ile Leu Arg Gly Gln Asp His Cys Gly
305 310 315 320

Ile Glu Ser Glu Val Val Ala Gly Ile Pro Arg Thr Asp Gln Tyr Trp
325 330 335

Glu Lys Ile

<210> 168
<211> 472
<212> PRT
<213> Homo sapiens

<400> 168

Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
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Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
20 25 30

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
35 40 45

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
50 55 60

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile Thr Glu
65 70 75 80

Phe Tyr Asn Lys Ser Leu Ser Ser Phe Lys Glu Asn Glu Glu Asn Ile
85 90 95

Gln Cys Gly Glu Asn Phe Met Asp Ile Glu Cys Phe Met Val Leu Asn
100 105 110

Pro Ser Gln Gln Leu Ala Ile Ala Val Leu Ser Leu Thr Leu Gly Thr
115 120 125

Phe Thr Val Leu Glu Asn Leu Leu Val Leu Cys Val Ile Leu His Ser
130 135 140
Arg Ser Leu Arg Cys Arg Pro Ser Tyr His Phe Ile Gly Ser Leu Ala
145 150 155 160
Val Ala Asp Leu Leu Gly Ser Val Ile Phe Val Tyr Ser Phe Ile Asp
165 170 175
Phe His Val Phe His Arg Lys Asp Ser Arg Asn Val Phe Leu Phe Lys
180 185 190
Leu Gly Gly Val Thr Ala Ser Phe Thr Ala Ser Val Gly Ser Leu Phe
195 200 205
Leu Thr Ala Ile Asp Arg Tyr Ile Ser Ile His Arg Pro Leu Ala Tyr
210 215 220
Lys Arg Ile Val Thr Arg Pro Lys Ala Val Val Ala Phe Cys Leu Met
225 230 235 240
Trp Thr Ile Ala Ile Val Ile Ala Val Leu Pro Leu Leu Gly Trp Asn
245 250 255
Cys Glu Lys Leu Gln Ser Val Cys Ser Asp Ile Phe Pro His Ile Asp
260 265 270
Glu Thr Tyr Leu Met Phe Trp Ile Gly Val Thr Ser Val Leu Leu Leu
275 280 285
Phe Ile Val Tyr Ala Tyr Met Tyr Ile Leu Trp Lys Ala His Ser His
290 295 300
Ala Val Arg Met Ile Gln Arg Gly Thr Gln Lys Ser Ile Ile Ile His
305 310 315 320
Thr Ser Glu Asp Gly Lys Val Gln Val Thr Arg Pro Asp Gln Ala Arg
325 330 335
Met Asp Ile Arg Leu Ala Lys Thr Leu Val Leu Ile Leu Val Val Leu
340 345 350
Ile Ile Cys Trp Gly Pro Leu Leu Ala Ile Met Val Tyr Asp Val Phe
355 360 365
Gly Lys Met Asn Lys Leu Ile Lys Thr Val Phe Ala Phe Cys Ser Met
370 375 380

Leu Cys Leu Leu Asn Ser Thr Val Asn Pro Ile Ile Tyr Ala Leu Arg
 385 390 395 400

Ser Lys Asp Leu Arg His Ala Phe Arg Ser Met Phe Pro Ser Cys Glu
 405 410 415

Gly Thr Ala Gln Pro Leu Asp Asn Ser Met Gly Asp Ser Asp Cys Leu
 420 425 430

His Lys His Ala Asn Asn Ala Ala Ser Val His Arg Ala Ala Glu Ser
 435 440 445

Cys Ile Lys Ser Thr Val Lys Ile Ala Lys Val Thr Met Ser Val Ser
 450 455 460

Thr Asp Thr Ser Ala Glu Ala Leu
 465 470

<210> 169
 <211> 426
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 <213> Homo sapiens

<400> 169

Ala Gly Glu Asp Cys Gly Glu Glu Val Pro Thr Ile Glu Gly Met Arg
 1 5 10 15

Met His Leu Leu Glu Glu Thr Thr Val Arg Thr Glu Trp Thr Pro Ala
 20 25 30

Pro Gly Pro Val Asp Ala Tyr Glu Ile Gln Phe Ile Pro Thr Thr Glu
 35 40 45

Gly Ala Ser Pro Pro Phe Thr Ala Arg Val Pro Ser Ser Ala Ser Ala
 50 55 60

Tyr Asp Gln Arg Gly Leu Ala Pro Gly Gln Glu His Gln Val Thr Val
 65 70 75 80

Arg Ala Leu Arg Gly Thr Ser Trp Gly Leu Pro Ala Ser Lys Thr Val
 85 90 95

Thr Thr Met Ile Asp Gly Pro Gln Asp Leu Arg Val Val Ala Val Thr
 100 105 110

Pro Thr Thr Leu Glu Leu Gly Trp Leu Arg Pro Gln Ala Glu Val Asp
 115 120 125

Arg Phe Val Val Ser Tyr Val Ser Ala Asp Asn Gln Arg Val Arg Leu
 130 135 140
 Glu Val Pro Pro Glu Ala Asp Gly Thr Leu Leu Thr Asp Leu Met Pro
 145 150 155 160
 Gly Val Glu Tyr Val Val Thr Val Thr Ala Glu Arg Gly Arg Ala Val
 165 170 175
 Ser Tyr Pro Ala Ser Val Arg Ala Asn Thr Gly Ser Ser Pro Leu Gly
 180 185 190
 Leu Leu Gly Thr Thr Asp Glu Pro Pro Pro Ser Gly Pro Ser Thr Thr
 195 200 205
 Gln Gly Ala Gln Ala Pro Leu Leu Gln Gln Arg Pro Gln Glu Leu Gly
 210 215 220
 Glu Leu Arg Val Leu Gly Arg Asp Glu Thr Gly Arg Leu Arg Val Val
 225 230 235 240
 Trp Thr Ala Gln Pro Asp Thr Phe Ala Tyr Phe Gln Leu Arg Met Arg
 245 250 255
 Val Pro Glu Gly Pro Gly Ala His Glu Glu Val Leu Pro Gly Asp Val
 260 265 270
 Arg Gln Ala Leu Val Pro Pro Pro Pro Pro Gly Thr Pro Tyr Glu Leu
 275 280 285
 Ser Leu His Gly Val Pro Pro Gly Gly Lys Pro Ser Asp Pro Ile Ile
 290 295 300
 Tyr Gln Gly Ile Met Asp Lys Asp Glu Glu Lys Pro Gly Lys Ser Ser
 305 310 315 320
 Gly Pro Pro Arg Leu Gly Glu Leu Thr Val Thr Asp Arg Thr Ser Asp
 325 330 335
 Ser Leu Leu Leu Arg Trp Thr Val Pro Glu Gly Glu Phe Asp Ser Phe
 340 345 350
 Val Ile Gln Tyr Lys Asp Arg Asp Gly Gln Pro Gln Val Val Pro Val
 355 360 365
 Glu Gly Pro Gln Arg Ser Ala Val Ile Thr Ser Leu Asp Pro Gly Arg
 370 375 380

Lys Tyr Lys Phe Val Leu Tyr Gly Phe Val Gly Lys Lys Arg His Gly
385 390 395 400

Pro Leu Val Ala Glu Ala Lys Ile Leu Pro Gln Ser Asp Pro Ser Pro
405 410 415

Gly Thr Pro Pro Arg Leu Gly Asn Leu Trp
420 425

<210> 170
<211> 664
<212> PRT
<213> Homo sapiens

<400> 170

Met Glu Gly Phe Met Asp Ser Gly Thr Gln Thr Asp Ala Val Val Val
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Leu Ser Leu Ala Gln Ala Ala Val Leu Gly Leu Val Ser Glu Asn Glu
20 25 30

Leu Phe Gly Ala Thr Ile Ser Ala Glu Ala Phe Tyr Pro Asp Leu Gly
35 40 45

Pro Glu Leu Ser Gly Ala Ala Met Gly Glu Pro Glu Pro Pro Gly Pro
50 55 60

Asp Val Tyr Gln Leu Ala Cys Asn Gly Arg Ala Leu Glu Glu Pro Ala
65 70 75 80

Glu Glu Glu Val Leu Glu Val Glu Ala Ala Cys Glu Lys His Thr Arg
85 90 95

Arg Lys Thr Arg Pro Pro Val Arg Leu Val Pro Lys Val Lys Phe Glu
100 105 110

Lys Val Glu Glu Glu Gln Glu Val Tyr Glu Val Ser Val Pro Gly
115 120 125

Asp Asp Lys Asp Ala Gly Pro Ala Glu Ala Pro Ala Glu Ala Ala Ser
130 135 140

Gly Gly Cys Asp Ala Leu Val Gln Ser Ser Ala Val Lys Met Ile Asp
145 150 155 160

Leu Ser Ala Phe Ser Arg Lys Pro Arg Thr Leu Arg His Leu Pro Arg
165 170 175

Thr Pro Arg Pro Glu Leu Asn Val Ala Pro Tyr Asp Pro His Phe Pro
Page 458

180												185				190			
Ala	Pro	Ala 195	Arg	Asp	Gly	Phe	Pro 200	Glu	Pro	Ser	Met	Ala 205	Leu	Pro	Gly				
Pro	Glu 210	Ala	Leu	Pro	Thr	Glu 215	Cys	Gly	Phe	Glu	Pro 220	Pro	His	Leu	Ala				
Pro 225	Leu	Ser	Asp	Pro	Glu 230	Ala	Pro	Ser	Met	Glu 235	Ser	Pro	Glu	Pro	Val 240				
Lys	Pro	Glu	Gln	Gly 245	Phe	Val	Trp	Gln	Glu 250	Ala	Ser	Glu	Phe	Glu 255	Ala				
Asp	Thr	Ala	Gly 260	Ser	Thr	Val	Glu	Arg 265	His	Lys	Lys	Ala	Gln 270	Leu	Asp				
Arg	Leu	Asp 275	Ile	Asn	Val	Gln	Ile 280	Asp	Asp	Ser	Tyr	Leu 285	Val	Glu	Ala				
Gly	Asp 290	Arg	Gln	Lys	Arg	Trp 295	Gln	Cys	Arg	Met	Cys 300	Glu	Lys	Ser	Tyr				
Thr 305	Ser	Lys	Tyr	Asn	Leu 310	Val	Thr	His	Ile	Leu 315	Gly	His	Asn	Gly	Ile 320				
Lys	Pro	His	Ser	Cys 325	Pro	His	Cys	Ser	Lys 330	Leu	Phe	Lys	Gln	Pro 335	Ser				
His	Leu	Gln	Thr 340	His	Leu	Leu	Thr	His 345	Gln	Gly	Thr	Arg	Pro 350	His	Lys				
Cys	Gln	Val 355	Cys	His	Lys	Ala	Phe 360	Thr	Gln	Thr	Ser	His 365	Leu	Lys	Arg				
His	Met 370	Leu	Leu	His	Ser	Glu 375	Val	Lys	Pro	Tyr	Ser 380	Cys	His	Phe	Cys				
Gly 385	Arg	Gly	Phe	Ala	Tyr 390	Pro	Ser	Glu	Leu	Lys 395	Ala	His	Glu	Val	Lys 400				
His	Glu	Ser	Gly	Arg 405	Cys	His	Val	Cys	Val 410	Glu	Cys	Gly	Leu	Asp 415	Phe				
Ser	Thr	Leu	Thr 420	Gln	Leu	Lys	Arg	His 425	Leu	Ala	Ser	His	Gln 430	Gly	Pro				
Thr	Leu	Tyr	Gln	Cys	Leu	Glu	Cys	Asp	Lys	Ser	Phe	His	Tyr	Arg	Ser				

435

440

445

Gln Leu Gln Asn His Met Leu Lys His Gln Asn Val Arg Pro Phe Val
 450 455 460

Cys Thr Glu Cys Gly Met Glu Phe Ser Gln Ile His His Leu Lys Gln
 465 470 475 480

His Ser Leu Thr His Lys Gly Val Lys Glu Phe Lys Cys Glu Val Cys
 485 490 495

Gly Arg Glu Phe Thr Leu Gln Ala Asn Met Lys Arg His Met Leu Ile
 500 505 510

His Thr Ser Val Arg Pro Tyr Gln Cys His Ile Cys Phe Lys Thr Phe
 515 520 525

Val Gln Lys Gln Thr Leu Lys Thr His Met Ile Val His Ser Pro Val
 530 535 540

Lys Pro Phe Lys Cys Lys Val Cys Gly Lys Ser Phe Asn Arg Met Tyr
 545 550 555 560

Asn Leu Leu Gly His Met His Leu His Ala Gly Ser Lys Pro Phe Lys
 565 570 575

Cys Pro Tyr Cys Ser Ser Lys Phe Asn Leu Lys Gly Asn Leu Ser Arg
 580 585 590

His Met Lys Val Lys His Gly Val Ile Asp Ile Gly Leu Asp Ser Gln
 595 600 605

Asp Pro Met Met Glu Leu Thr Gly Thr Asp Pro Ser Glu Leu Asp Gly
 610 615 620

Gln Gln Glu Met Glu Asp Phe Glu Glu Asn Ala Tyr Ser Tyr Ala Ser
 625 630 635 640

Val Asp Ser Ser Ala Glu Ala Ser Val Leu Thr Glu Gln Ala Met Lys
 645 650 655

Glu Met Ala Tyr Tyr Asn Val Leu
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<210> 171

<211> 1028

<212> PRT

<213> Homo sapiens

<400> 171

Met Asp Ser Ala Leu Thr Ala Arg Asp Arg Val Gly Val Gln Asp Phe
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Val Leu Leu Glu Asn Phe Thr Ser Glu Ala Ala Phe Ile Glu Asn Leu
20 25 30

Arg Arg Arg Phe Arg Glu Asn Leu Ile Tyr Thr Tyr Ile Gly Pro Val
35 40 45

Leu Val Ser Val Asn Pro Tyr Arg Asp Leu Gln Ile Tyr Ser Arg Gln
50 55 60

His Met Glu Arg Tyr Arg Gly Val Ser Phe Tyr Glu Val Pro Pro His
65 70 75 80

Leu Phe Ala Val Ala Asp Thr Val Tyr Arg Ala Leu Arg Thr Glu Arg
85 90 95

Arg Asp Gln Ala Val Met Ile Ser Gly Glu Ser Gly Ala Gly Lys Thr
100 105 110

Glu Ala Thr Lys Lys Leu Leu Gln Phe Tyr Ala Glu Thr Cys Pro Ala
115 120 125

Pro Gln Arg Gly Gly Ala Val Arg Asp Arg Leu Leu Gln Ser Asn Pro
130 135 140

Val Leu Glu Ala Phe Gly Asn Ala Lys Thr Leu Arg Asn Asp Asn Ser
145 150 155 160

Ser Arg Phe Gly Lys Tyr Met Asp Val Gln Phe Asp Phe Lys Gly Ala
165 170 175

Pro Val Gly Gly His Ile Leu Ser Tyr Leu Leu Glu Lys Ser Arg Val
180 185 190

Val His Gln Asn His Gly Glu Arg Asn Phe His Ile Phe Tyr Gln Leu
195 200 205

Leu Glu Gly Gly Glu Glu Glu Thr Leu Arg Arg Leu Gly Leu Glu Arg
210 215 220

Asn Pro Gln Ser Tyr Leu Tyr Leu Val Lys Gly Gln Cys Ala Lys Val
225 230 235 240

Ser Ser Ile Asn Asp Lys Ser Asp Trp Lys Val Val Arg Lys Ala Leu
245 250 255

Thr Val Ile Asp Phe Thr Glu Asp Glu Val Glu Asp Leu Leu Ser Ile
 260 265 270
 Val Ala Ser Val Leu His Leu Gly Asn Ile His Phe Ala Ala Asn Glu
 275 280 285
 Asp Ser Asn Ala Gln Val Thr Thr Glu Asn Gln Leu Lys Tyr Leu Thr
 290 295 300
 Arg Leu Leu Ser Val Glu Gly Ser Thr Leu Arg Glu Ala Leu Thr His
 305 310 315 320
 Arg Lys Ile Ile Ala Lys Gly Glu Glu Leu Leu Ser Pro Leu Asn Leu
 325 330 335
 Glu Gln Ala Ala Tyr Ala Arg Asn Ala Leu Ala Lys Ala Val Tyr Ser
 340 345 350
 Arg Thr Phe Thr Trp Leu Val Gly Lys Ile Asn Arg Ser Leu Ala Ser
 355 360 365
 Lys Asp Val Glu Ser Pro Ser Trp Arg Ser Thr Thr Val Leu Gly Leu
 370 375 380
 Leu Asp Ile Tyr Gly Phe Glu Val Phe Gln His Asn Ser Phe Glu Gln
 385 390 395 400
 Phe Cys Ile Asn Tyr Cys Asn Glu Lys Leu Gln Gln Leu Phe Ile Glu
 405 410 415
 Leu Pro Leu Lys Ser Glu Gln Glu Glu Tyr Glu Ala Glu Gly Ile Ala
 420 425 430
 Trp Glu Pro Val Gln Tyr Phe Asn Asn Lys Ile Ile Cys Asp Leu Val
 435 440 445
 Glu Glu Lys Phe Lys Gly Ile Ile Ser Ile Leu Asp Glu Glu Cys Leu
 450 455 460
 Arg Pro Gly Glu Ala Thr Asp Leu Thr Phe Leu Glu Lys Leu Glu Asp
 465 470 475 480
 Thr Val Lys His His Pro His Phe Leu Thr His Lys Leu Ala Asp Gln
 485 490 495
 Arg Thr Arg Lys Ser Leu Gly Arg Gly Glu Phe Arg Leu Leu His Tyr
 500 505 510

Ala Gly Glu Val Thr Tyr Ser Val Thr Gly Phe Leu Asp Lys Asn Asn
 515 520 525

Asp Leu Leu Phe Arg Asn Leu Lys Glu Thr Met Cys Ser Ser Lys Asn
 530 535 540

Pro Ile Met Ser Gln Cys Phe Asp Arg Ser Glu Leu Ser Asp Lys Lys
 545 550 555 560

Arg Pro Glu Thr Val Ala Thr Gln Phe Lys Met Ser Leu Leu Gln Leu
 565 570 575

Val Glu Ile Leu Gln Ser Lys Glu Pro Ala Tyr Val Arg Cys Ile Lys
 580 585 590

Pro Asn Asp Ala Lys Gln Pro Gly Arg Phe Asp Glu Val Leu Ile Arg
 595 600 605

His Gln Val Lys Tyr Leu Gly Leu Leu Glu Asn Leu Arg Val Arg Arg
 610 615 620

Ala Gly Phe Ala Tyr Arg Arg Lys Tyr Glu Ala Phe Leu Gln Arg Tyr
 625 630 635 640

Lys Ser Leu Cys Pro Glu Thr Trp Pro Thr Trp Ala Gly Arg Pro Gln
 645 650 655

Asp Gly Val Ala Val Leu Val Arg His Leu Gly Tyr Lys Pro Glu Glu
 660 665 670

Tyr Lys Met Gly Arg Thr Lys Ile Phe Ile Arg Phe Pro Lys Thr Leu
 675 680 685

Phe Ala Thr Glu Asp Ala Leu Glu Val Arg Arg Gln Ser Leu Ala Thr
 690 695 700

Lys Ile Gln Ala Ala Trp Arg Gly Phe His Trp Arg Gln Lys Phe Leu
 705 710 715 720

Arg Val Lys Arg Ser Ala Ile Cys Ile Gln Ser Trp Trp Arg Gly Thr
 725 730 735

Leu Gly Arg Arg Lys Ala Ala Lys Arg Lys Trp Ala Ala Gln Thr Ile
 740 745 750

Arg Arg Leu Ile Arg Gly Phe Ile Leu Arg His Ala Pro Arg Cys Pro
 755 760 765

Glu Asn Ala Phe Phe Leu Asp His Val Arg Thr Ser Phe Leu Leu Asn
770 775 780

Leu Arg Arg Gln Leu Pro Arg Asn Val Leu Asp Thr Tyr Trp Pro Thr
785 790 795 800

Pro Pro Pro Ala Leu Arg Glu Ala Ser Glu Leu Leu Arg Glu Leu Cys
805 810 815

Ile Lys Asn Met Val Trp Lys Tyr Cys Arg Ser Ile Ser Pro Glu Trp
820 825 830

Lys Gln Gln Leu Gln Gln Lys Ala Val Ala Ser Glu Ile Phe Lys Gly
835 840 845

Lys Lys Asp Asn Tyr Pro Gln Ser Val Pro Arg Leu Phe Ile Ser Thr
850 855 860

Arg Leu Gly Thr Asp Glu Ile Ser Pro Arg Val Leu Gln Ala Leu Gly
865 870 875 880

Ser Glu Pro Ile Gln Tyr Ala Val Pro Val Val Lys Tyr Asp Arg Lys
885 890 895

Gly Tyr Lys Pro Arg Ser Arg Gln Leu Leu Leu Thr Pro Asn Ala Val
900 905 910

Val Ile Val Glu Asp Ala Lys Val Lys Gln Arg Ile Asp Tyr Ala Asn
915 920 925

Leu Thr Gly Ile Ser Val Ser Ser Leu Ser Asp Ser Leu Phe Val Leu
930 935 940

His Val Gln Arg Ala Asp Ile Lys Gln Lys Gly Asp Val Val Leu Gln
945 950 955 960

Ser Asp His Val Ile Glu Thr Leu Thr Lys Thr Ala Leu Ser Ala Asn
965 970 975

Arg Val Asn Ser Ile Asn Ile Asn Gln Gly Ser Ile Thr Phe Ala Gly
980 985 990

Gly Pro Gly Arg Asp Gly Thr Ile Asp Phe Thr Pro Gly Ser Glu Leu
995 1000 1005

Leu Ile Thr Lys Ala Lys Asn Gly His Leu Ala Val Val Ala Pro
1010 1015 1020

Arg Leu Asn Tyr Arg
1025

<210> 172
<211> 2426
<212> PRT
<213> Homo sapiens

<400> 172

Met Ala Thr Asn Ile Glu Gln Ile Phe Arg Ser Phe Val Val Ser Lys
1 5 10 15

Phe Arg Glu Ile Gln Gln Glu Leu Ser Ser Gly Arg Asn Glu Gly Gln
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Leu Asn Gly Glu Thr Asn Thr Pro Ile Glu Gly Asn Gln Ala Gly Asp
35 40 45

Ala Ala Ala Ser Ala Arg Ser Leu Pro Asn Glu Glu Ile Val Gln Lys
50 55 60

Ile Glu Glu Val Leu Ser Gly Val Leu Asp Thr Glu Leu Arg Tyr Lys
65 70 75 80

Pro Asp Leu Lys Glu Gly Ser Arg Lys Ser Arg Cys Val Ser Val Gln
85 90 95

Thr Asp Pro Thr Asp Glu Ile Pro Thr Lys Lys Ser Lys Lys His Lys
100 105 110

Lys His Lys Asn Lys Lys Lys Lys Lys Lys Glu Lys Glu Lys Lys
115 120 125

Tyr Lys Arg Gln Pro Glu Glu Ser Glu Ser Lys Thr Lys Ser His Asp
130 135 140

Asp Gly Asn Ile Asp Leu Glu Ser Asp Ser Phe Leu Lys Phe Asp Ser
145 150 155 160

Glu Pro Ser Ala Val Ala Leu Glu Leu Pro Thr Arg Ala Phe Gly Pro
165 170 175

Ser Glu Thr Asn Glu Ser Pro Ala Val Val Leu Glu Pro Pro Val Val
180 185 190

Ser Met Glu Val Ser Glu Pro His Ile Leu Glu Thr Leu Lys Pro Ala
195 200 205

Thr Lys Thr Ala Glu Leu Ser Val Val Ser Thr Ser Val Ile Ser Glu
 210 215 220
 Gln Ser Glu Gln Ser Val Ala Val Met Pro Glu Pro Ser Met Thr Lys
 225 230 235 240
 Ile Leu Asp Ser Phe Ala Ala Ala Pro Val Pro Thr Thr Thr Leu Val
 245 250 255
 Leu Lys Ser Ser Glu Pro Val Val Thr Met Ser Val Glu Tyr Gln Met
 260 265 270
 Lys Ser Val Leu Lys Ser Val Glu Ser Thr Ser Pro Glu Pro Ser Lys
 275 280 285
 Ile Met Leu Val Glu Pro Pro Val Ala Lys Val Leu Glu Pro Ser Glu
 290 295 300
 Thr Leu Val Val Ser Ser Glu Thr Pro Thr Glu Val Tyr Pro Glu Pro
 305 310 315 320
 Ser Thr Ser Thr Thr Met Asp Phe Pro Glu Ser Ser Ala Ile Glu Ala
 325 330 335
 Leu Arg Leu Pro Glu Gln Pro Val Asp Val Pro Ser Glu Ile Ala Asp
 340 345 350
 Ser Ser Met Thr Arg Pro Gln Glu Leu Pro Glu Leu Pro Lys Thr Thr
 355 360 365
 Ala Leu Glu Leu Gln Glu Ser Ser Val Ala Ser Ala Met Glu Leu Pro
 370 375 380
 Gly Pro Pro Ala Thr Ser Met Pro Glu Leu Gln Gly Pro Pro Val Thr
 385 390 395 400
 Pro Val Leu Glu Leu Pro Gly Pro Ser Ala Thr Pro Val Pro Glu Leu
 405 410 415
 Pro Gly Pro Leu Ser Thr Pro Val Pro Glu Leu Pro Gly Pro Pro Ala
 420 425 430
 Thr Ala Val Pro Glu Leu Pro Gly Pro Ser Val Thr Pro Val Pro Gln
 435 440 445
 Leu Ser Gln Glu Leu Pro Gly Leu Pro Ala Pro Ser Met Gly Leu Glu
 450 455 460

Pro Pro Gln Glu Val Pro Glu Pro Ser Val Met Ala Gln Glu Leu Pro
 465 470 475 480
 Gly Leu Pro Leu Val Thr Ala Ala Val Glu Leu Pro Glu Gln Pro Ala
 485 490 495
 Val Thr Val Ala Met Glu Leu Thr Glu Gln Pro Val Thr Thr Thr Glu
 500 505 510
 Leu Glu Gln Pro Val Gly Met Thr Thr Val Glu His Pro Gly His Pro
 515 520 525
 Glu Val Thr Thr Ala Thr Gly Leu Leu Gly Gln Pro Glu Ala Thr Met
 530 535 540
 Val Leu Glu Leu Pro Gly Gln Pro Val Ala Thr Thr Ala Leu Glu Leu
 545 550 555 560
 Pro Gly Gln Pro Ser Val Thr Gly Val Pro Glu Leu Pro Gly Leu Pro
 565 570 575
 Ser Ala Thr Arg Ala Leu Glu Leu Ser Gly Gln Pro Val Ala Thr Gly
 580 585 590
 Ala Leu Glu Leu Pro Gly Pro Leu Met Ala Ala Gly Ala Leu Glu Phe
 595 600 605
 Ser Gly Gln Ser Gly Ala Ala Gly Ala Leu Glu Leu Leu Gly Gln Pro
 610 615 620
 Leu Ala Thr Gly Val Leu Glu Leu Pro Gly Gln Pro Gly Ala Pro Glu
 625 630 635 640
 Leu Pro Gly Gln Pro Val Ala Thr Val Ala Leu Glu Ile Ser Val Gln
 645 650 655
 Ser Val Val Thr Thr Ser Glu Leu Ser Thr Met Thr Val Ser Gln Ser
 660 665 670
 Leu Glu Val Pro Ser Thr Thr Ala Leu Glu Ser Tyr Asn Thr Val Ala
 675 680 685
 Gln Glu Leu Pro Thr Thr Leu Val Gly Glu Thr Ser Val Thr Val Gly
 690 695 700
 Val Asp Pro Leu Met Ala Pro Glu Ser His Ile Leu Ala Ser Asn Thr
 705 710 715 720

Met Glu Thr His Ile Leu Ala Ser Asn Thr Met Asp Ser Gln Met Leu
 725 730 735

Ala Ser Asn Thr Met Asp Ser Gln Met Leu Ala Ser Asn Thr Met Asp
 740 745 750

Ser Gln Met Leu Ala Ser Ser Thr Met Asp Ser Gln Met Leu Ala Thr
 755 760 765

Ser Ser Met Asp Ser Gln Met Leu Ala Thr Ser Ser Met Asp Ser Gln
 770 775 780

Met Leu Ala Thr Ser Thr Met Asp Ser Gln Met Leu Ala Thr Ser Ser
 785 790 795 800

Met Asp Ser Gln Met Leu Ala Thr Ser Ser Met Asp Ser Gln Met Leu
 805 810 815

Ala Thr Ser Ser Met Asp Ser Gln Met Leu Ala Thr Ser Ser Met Asp
 820 825 830

Ser Gln Met Leu Ala Thr Ser Thr Met Asp Ser Gln Met Leu Ala Thr
 835 840 845

Ser Thr Met Asp Ser Gln Met Leu Ala Thr Ser Ser Met Asp Ser Gln
 850 855 860

Met Leu Ala Ser Gly Thr Met Asp Ser Gln Met Leu Ala Ser Gly Thr
 865 870 875 880

Met Asp Ala Gln Met Leu Ala Ser Gly Thr Met Asp Ala Gln Met Leu
 885 890 895

Ala Ser Ser Thr Gln Asp Ser Ala Met Leu Gly Ser Lys Ser Pro Asp
 900 905 910

Pro Tyr Arg Leu Ala Gln Asp Pro Tyr Arg Leu Ala Gln Asp Pro Tyr
 915 920 925

Arg Leu Gly His Asp Pro Tyr Arg Leu Gly His Asp Ala Tyr Arg Leu
 930 935 940

Gly Gln Asp Pro Tyr Arg Leu Gly His Asp Pro Tyr Arg Leu Thr Pro
 945 950 955 960

Asp Pro Tyr Arg Met Ser Pro Arg Pro Tyr Arg Ile Ala Pro Arg Ser
 965 970 975

Tyr Arg Ile Ala Pro Arg Pro Tyr Arg Leu Ala Pro Arg Pro Leu Met
 980 985 990
 Leu Ala Ser Arg Arg Ser Met Met Met Ser Tyr Ala Ala Glu Arg Ser
 995 1000 1005
 Met Met Ser Ser Tyr Glu Arg Ser Met Met Ser Tyr Glu Arg Ser
 1010 1015 1020
 Met Met Ser Pro Met Ala Glu Arg Ser Met Met Ser Ala Tyr Glu
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 Arg Ser Met Met Ser Ala Tyr Glu Arg Ser Met Met Ser Pro Met
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 Ala Glu Arg Ser Met Met Ser Ala Tyr Glu Arg Ser Met Met Ser
 1055 1060 1065
 Ala Tyr Glu Arg Ser Met Met Ser Pro Met Ala Asp Arg Ser Met
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 Met Ser Met Gly Ala Asp Arg Ser Met Met Ser Ser Tyr Ser Ala
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 Ala Asp Arg Ser Met Met Ser Ser Tyr Ser Ala Ala Asp Arg Ser
 1100 1105 1110
 Met Met Ser Ser Tyr Thr Ala Asp Arg Ser Met Met Ser Met Ala
 1115 1120 1125
 Ala Asp Ser Tyr Thr Asp Ser Tyr Thr Asp Thr Tyr Thr Glu Ala
 1130 1135 1140
 Tyr Met Val Pro Pro Leu Pro Pro Glu Glu Pro Pro Thr Met Pro
 1145 1150 1155
 Pro Leu Pro Pro Glu Glu Pro Pro Met Thr Pro Pro Leu Pro Pro
 1160 1165 1170
 Glu Glu Pro Pro Glu Gly Pro Ala Leu Pro Thr Glu Gln Ser Ala
 1175 1180 1185
 Leu Thr Ala Glu Asn Thr Trp Pro Thr Glu Val Pro Ser Leu Pro
 1190 1195 1200
 Ser Glu Glu Ser Val Ser Gln Pro Glu Pro Pro Val Ser Gln Ser
 1205 1210 1215

Glu Ile Ser Glu Pro Ser Ala Val Pro Thr Asp Tyr Ser Val Ser
 1220 1225 1230
 Ala Ser Asp Pro Ser Val Leu Val Ser Glu Ala Ala Val Thr Val
 1235 1240 1245
 Pro Glu Pro Pro Pro Glu Pro Glu Ser Ser Ile Thr Leu Thr Pro
 1250 1255 1260
 Val Glu Ser Ala Val Val Ala Glu Glu His Glu Val Val Pro Glu
 1265 1270 1275
 Arg Pro Val Thr Cys Met Val Ser Glu Thr Pro Ala Met Ser Ala
 1280 1285 1290
 Glu Pro Thr Val Leu Ala Ser Glu Pro Pro Val Met Ser Glu Thr
 1295 1300 1305
 Ala Glu Thr Phe Asp Ser Met Arg Ala Ser Gly His Val Ala Ser
 1310 1315 1320
 Glu Val Ser Thr Ser Leu Leu Val Pro Ala Val Thr Thr Pro Val
 1325 1330 1335
 Leu Ala Glu Ser Ile Leu Glu Pro Pro Ala Met Ala Ala Pro Glu
 1340 1345 1350
 Ser Ser Ala Met Ala Val Leu Glu Ser Ser Ala Val Thr Val Leu
 1355 1360 1365
 Glu Ser Ser Thr Val Thr Val Leu Glu Ser Ser Thr Val Thr Val
 1370 1375 1380
 Leu Glu Pro Ser Val Val Thr Val Pro Glu Pro Pro Val Val Ala
 1385 1390 1395
 Glu Pro Asp Tyr Val Thr Ile Pro Val Pro Val Val Ser Ala Leu
 1400 1405 1410
 Glu Pro Ser Val Pro Val Leu Glu Pro Ala Val Ser Val Leu Gln
 1415 1420 1425
 Pro Ser Met Ile Val Ser Glu Pro Ser Val Ser Val Gln Glu Ser
 1430 1435 1440
 Thr Val Thr Val Ser Glu Pro Ala Val Thr Val Ser Glu Gln Thr
 1445 1450 1455

Gln Val 1460	Ile Pro Thr Glu Val 1465	Ala Ile Glu Ser Thr 1470	Pro Met Ile
Leu Glu 1475	Ser Ser Ile Met Ser 1480	Ser His Val Met Lys 1485	Gly Ile Asn
Leu Ser 1490	Ser Gly Asp Gln Asn 1495	Leu Ala Pro Glu Ile 1500	Gly Met Gln
Glu Ile 1505	Ala Leu His Ser Gly 1510	Glu Glu Pro His Ala 1515	Glu Glu His
Leu Lys 1520	Gly Asp Phe Tyr Glu 1525	Ser Glu His Gly Ile 1530	Asn Ile Asp
Leu Asn 1535	Ile Asn Asn His Leu 1540	Ile Ala Lys Glu Met 1545	Glu His Asn
Thr Val 1550	Cys Ala Ala Gly Thr 1555	Ser Pro Val Gly Glu 1560	Ile Gly Glu
Glu Lys 1565	Ile Leu Pro Thr Ser 1570	Glu Thr Lys Gln Arg 1575	Thr Val Leu
Asp Thr 1580	Tyr Pro Gly Val Ser 1585	Glu Ala Asp Ala Gly 1590	Glu Thr Leu
Ser Ser 1595	Thr Gly Pro Phe Ala 1600	Leu Glu Pro Asp Ala 1605	Thr Gly Thr
Ser Lys 1610	Gly Ile Glu Phe Thr 1615	Thr Ala Ser Thr Leu 1620	Ser Leu Val
Asn Lys 1625	Tyr Asp Val Asp Leu 1630	Ser Leu Thr Thr Gln 1635	Asp Thr Glu
His Asp 1640	Met Val Ile Ser Thr 1645	Ser Pro Ser Gly Gly 1650	Ser Glu Ala
Asp Ile 1655	Glu Gly Pro Leu Pro 1660	Ala Lys Asp Ile His 1665	Leu Asp Leu
Pro Ser 1670	Asn Asn Asn Leu Val 1675	Ser Lys Asp Thr Glu 1680	Glu Pro Leu
Pro Val 1685	Lys Glu Ser Asp Gln 1690	Thr Leu Ala Ala Leu 1695	Leu Ser Pro

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Glu	Thr	Leu	Pro	Asp	Ser	Gly	Phe	Ser	Ala	Asn	Ile	Glu	Asp	Ile
	1715					1720					1725			
Asn	Glu	Ala	Asp	Leu	Val	Arg	Pro	Leu	Leu	Pro	Lys	Asp	Met	Glu
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Arg	Leu	Thr	Ser	Leu	Arg	Ala	Gly	Ile	Glu	Gly	Pro	Leu	Leu	Ala
	1745					1750					1755			
Ser	Asp	Val	Gly	Arg	Asp	Arg	Ser	Ala	Ala	Ser	Pro	Val	Val	Ser
	1760					1765					1770			
Ser	Met	Pro	Glu	Arg	Ala	Ser	Glu	Ser	Ser	Ser	Glu	Glu	Lys	Asp
	1775					1780					1785			
Asp	Tyr	Glu	Ile	Phe	Val	Lys	Val	Lys	Asp	Thr	His	Glu	Lys	Ser
	1790					1795					1800			
Lys	Lys	Asn	Lys	Asn	Arg	Asp	Lys	Gly	Glu	Lys	Glu	Lys	Lys	Arg
	1805					1810					1815			
Asp	Ser	Ser	Leu	Arg	Ser	Arg	Ser	Lys	Arg	Ser	Lys	Ser	Ser	Glu
	1820					1825					1830			
His	Lys	Ser	Arg	Lys	Arg	Thr	Ser	Glu	Ser	Arg	Ser	Arg	Ala	Arg
	1835					1840					1845			
Lys	Arg	Ser	Ser	Lys	Ser	Lys	Ser	His	Arg	Ser	Gln	Thr	Arg	Ser
	1850					1855					1860			
Arg	Ser	Arg	Ser	Arg	Arg	Arg	Arg	Arg	Ser	Ser	Arg	Ser	Arg	Ser
	1865					1870					1875			
Lys	Ser	Arg	Gly	Arg	Arg	Ser	Val	Ser	Lys	Glu	Lys	Arg	Lys	Arg
	1880					1885					1890			
Ser	Pro	Lys	His	Arg	Ser	Lys	Ser	Arg	Glu	Arg	Lys	Arg	Lys	Arg
	1895					1900					1905			
Ser	Ser	Ser	Arg	Asp	Asn	Arg	Lys	Thr	Val	Arg	Ala	Arg	Ser	Arg
	1910					1915					1920			
Thr	Pro	Ser	Arg	Arg	Ser	Arg	Ser	His	Thr	Pro	Ser	Arg	Arg	Arg
	1925					1930					1935			

Arg	Ser	Arg	Ser	Val	Gly	Arg	Arg	Arg	Ser	Phe	Ser	Ile	Ser	Pro
	1940					1945					1950			
Ser	Arg	Arg	Ser	Arg	Thr	Pro	Ser	Arg	Arg	Ser	Arg	Thr	Pro	Ser
	1955					1960					1965			
Arg	Arg	Ser	Arg	Thr	Pro	Ser	Arg	Arg	Ser	Arg	Thr	Pro	Ser	Arg
	1970					1975					1980			
Arg	Ser	Arg	Thr	Pro	Ser	Arg	Arg	Ser	Arg	Thr	Pro	Ser	Arg	Arg
	1985					1990					1995			
Arg	Arg	Ser	Arg	Ser	Val	Val	Arg	Arg	Arg	Ser	Phe	Ser	Ile	Ser
	2000					2005					2010			
Pro	Val	Arg	Leu	Arg	Arg	Ser	Arg	Thr	Pro	Leu	Arg	Arg	Arg	Phe
	2015					2020					2025			
Ser	Arg	Ser	Pro	Ile	Arg	Arg	Lys	Arg	Ser	Arg	Ser	Ser	Glu	Arg
	2030					2035					2040			
Gly	Arg	Ser	Pro	Lys	Arg	Leu	Thr	Asp	Leu	Asp	Lys	Ala	Gln	Leu
	2045					2050					2055			
Leu	Glu	Ile	Ala	Lys	Ala	Asn	Ala	Ala	Ala	Met	Cys	Ala	Lys	Ala
	2060					2065					2070			
Gly	Val	Pro	Leu	Pro	Pro	Asn	Leu	Lys	Pro	Ala	Pro	Pro	Pro	Thr
	2075					2080					2085			
Ile	Glu	Glu	Lys	Val	Ala	Lys	Lys	Ser	Gly	Gly	Ala	Thr	Ile	Glu
	2090					2095					2100			
Glu	Leu	Thr	Glu	Lys	Cys	Lys	Gln	Ile	Ala	Gln	Ser	Lys	Glu	Asp
	2105					2110					2115			
Asp	Asp	Val	Ile	Val	Asn	Lys	Pro	His	Val	Ser	Asp	Glu	Glu	Glu
	2120					2125					2130			
Glu	Glu	Pro	Pro	Phe	Tyr	His	His	Pro	Phe	Lys	Leu	Ser	Glu	Pro
	2135					2140					2145			
Lys	Pro	Ile	Phe	Phe	Asn	Leu	Asn	Ile	Ala	Ala	Ala	Lys	Pro	Thr
	2150					2155					2160			
Pro	Pro	Lys	Ser	Gln	Val	Thr	Leu	Thr	Lys	Glu	Phe	Pro	Val	Ser
	2165					2170					2175			

Ser Gly 2180 Ser Gln His Arg Lys 2185 Lys Glu Ala Asp Ser 2190 Val Tyr Gly
 Glu Trp 2195 Val Pro Val Glu Lys 2200 Asn Gly Glu Glu Asn 2205 Lys Asp Asp
 Asp Asn 2210 Val Phe Ser Ser Asn 2215 Leu Pro Ser Glu Pro 2220 Val Asp Ile
 Ser Thr 2225 Ala Met Ser Glu Arg 2230 Ala Leu Ala Gln Lys 2235 Arg Leu Ser
 Glu Asn 2240 Ala Phe Asp Leu Glu 2245 Ala Met Ser Met Leu 2250 Asn Arg Ala
 Gln Glu 2255 Arg Ile Asp Ala Trp 2260 Ala Gln Leu Asn Ser 2265 Ile Pro Gly
 Gln Phe 2270 Thr Gly Ser Thr Gly 2275 Val Gln Val Leu Thr 2280 Gln Glu Gln
 Leu Ala 2285 Asn Thr Gly Ala Gln 2290 Ala Trp Ile Lys Lys 2295 Asp Gln Phe
 Leu Arg 2300 Ala Ala Pro Val Thr 2305 Gly Gly Met Gly Ala 2310 Val Leu Met
 Arg Lys 2315 Met Gly Trp Arg Glu 2320 Gly Glu Gly Leu Gly 2325 Lys Asn Lys
 Glu Gly 2330 Asn Lys Glu Pro Ile 2335 Leu Val Asp Phe Lys 2340 Thr Asp Arg
 Lys Gly 2345 Leu Val Ala Val Gly 2350 Glu Arg Ala Gln Lys 2355 Arg Ser Gly
 Asn Phe 2360 Ser Ala Ala Met Lys 2365 Asp Leu Ser Gly Lys 2370 His Pro Val
 Ser Ala 2375 Leu Met Glu Ile Cys 2380 Asn Lys Arg Arg Trp 2385 Gln Pro Pro
 Glu Phe 2390 Leu Leu Val His Asp 2395 Ser Gly Pro Asp His 2400 Arg Lys His
 Phe Leu 2405 Phe Arg Val Leu Arg 2410 Asn Gly Ala Leu Thr 2415 Arg Pro Asn

Cys Met Phe Phe Leu Asn Arg Tyr
 2420 2425

<210> 173
 <211> 957
 <212> PRT
 <213> Homo sapiens

<400> 173

Met Arg Pro Gly Thr Gly Ala Glu Arg Gly Gly Leu Met Val Ser Glu
 1 5 10 15

Met Glu Ser His Pro Pro Ser Gln Gly Pro Gly Asp Gly Glu Arg Arg
 20 25 30

Leu Ser Gly Ser Ser Leu Cys Ser Gly Ser Trp Val Ser Ala Asp Gly
 35 40 45

Phe Leu Arg Arg Arg Pro Ser Met Gly His Pro Gly Met His Tyr Ala
 50 55 60

Pro Met Gly Met His Pro Met Gly Gln Arg Ala Asn Met Pro Pro Val
 65 70 75 80

Pro His Gly Met Met Pro Gln Met Met Pro Pro Met Gly Gly Pro Pro
 85 90 95

Met Gly Gln Met Pro Gly Met Met Ser Ser Val Met Pro Gly Met Met
 100 105 110

Met Ser His Met Ser Gln Ala Ser Met Gln Pro Ala Leu Pro Pro Gly
 115 120 125

Val Asn Ser Met Asp Val Ala Ala Gly Thr Ala Ser Gly Ala Lys Ser
 130 135 140

Met Trp Thr Glu His Lys Ser Pro Asp Gly Arg Thr Tyr Tyr Tyr Asn
 145 150 155 160

Thr Glu Thr Lys Gln Ser Thr Trp Glu Lys Pro Asp Asp Leu Lys Thr
 165 170 175

Pro Ala Glu Gln Leu Leu Ser Lys Cys Pro Trp Lys Glu Tyr Lys Ser
 180 185 190

Asp Ser Gly Lys Pro Tyr Tyr Tyr Asn Ser Gln Thr Lys Glu Ser Arg
 195 200 205

Trp Ala Lys Pro Lys Glu Leu Glu Asp Leu Glu Gly Tyr Gln Asn Thr
 210 215 220
 Ile Val Ala Gly Ser Leu Ile Thr Lys Ser Asn Leu His Ala Met Ile
 225 230 235 240
 Lys Ala Glu Glu Ser Ser Lys Gln Glu Glu Cys Thr Thr Thr Ser Thr
 245 250 255
 Ala Pro Val Pro Thr Thr Glu Ile Pro Thr Thr Met Ser Thr Met Ala
 260 265 270
 Ala Ala Glu Ala Ala Ala Ala Val Val Ala Ala Ala Ala Ala Ala Ala
 275 280 285
 Ala Ala Ala Ala Ala Ala Asn Ala Asn Ala Ser Thr Ser Ala Ser Asn
 290 295 300
 Thr Val Ser Gly Thr Val Pro Val Val Pro Glu Pro Glu Val Thr Ser
 305 310 315 320
 Ile Val Ala Thr Val Val Asp Asn Glu Asn Thr Val Thr Ile Ser Thr
 325 330 335
 Glu Glu Gln Ala Gln Leu Thr Ser Thr Pro Ala Ile Gln Asp Gln Ser
 340 345 350
 Val Glu Val Ser Ser Asn Thr Gly Glu Glu Thr Ser Lys Gln Glu Thr
 355 360 365
 Val Ala Asp Phe Thr Pro Lys Lys Glu Glu Glu Glu Ser Gln Pro Ala
 370 375 380
 Lys Lys Thr Tyr Thr Trp Asn Thr Lys Glu Glu Ala Lys Gln Ala Phe
 385 390 395 400
 Lys Glu Leu Leu Lys Glu Lys Arg Val Pro Ser Asn Ala Ser Trp Glu
 405 410 415
 Gln Ala Met Lys Met Ile Ile Asn Asp Pro Arg Tyr Ser Ala Leu Ala
 420 425 430
 Lys Leu Ser Glu Lys Lys Gln Ala Phe Asn Ala Tyr Lys Val Gln Thr
 435 440 445
 Glu Lys Glu Glu Lys Glu Glu Ala Arg Ser Lys Tyr Lys Glu Ala Lys
 450 455 460

Glu Ser Phe Gln Arg Phe Leu Glu Asn His Glu Lys Met Thr Ser Thr
465 470 475 480

Thr Arg Tyr Lys Lys Ala Glu Gln Met Phe Gly Glu Met Glu Val Trp
485 490 495

Asn Ala Ile Ser Glu Arg Asp Arg Leu Glu Ile Tyr Glu Asp Val Leu
500 505 510

Phe Phe Leu Ser Lys Lys Glu Lys Glu Gln Ala Lys Gln Leu Arg Lys
515 520 525

Arg Asn Trp Glu Ala Leu Lys Asn Ile Leu Asp Asn Met Ala Asn Val
530 535 540

Thr Tyr Ser Thr Thr Trp Ser Glu Ala Gln Gln Tyr Leu Met Asp Asn
545 550 555 560

Pro Thr Phe Ala Glu Asp Glu Glu Leu Gln Asn Met Asp Lys Glu Asp
565 570 575

Ala Leu Ile Cys Phe Glu Glu His Ile Arg Ala Leu Glu Lys Glu Glu
580 585 590

Glu Glu Glu Lys Gln Lys Ser Leu Leu Arg Glu Arg Arg Arg Gln Arg
595 600 605

Lys Asn Arg Glu Ser Phe Gln Ile Phe Leu Asp Glu Leu His Glu His
610 615 620

Gly Gln Leu His Ser Met Ser Ser Trp Met Glu Leu Tyr Pro Thr Ile
625 630 635 640

Ser Ser Asp Ile Arg Phe Thr Asn Met Leu Gly Gln Pro Gly Ser Thr
645 650 655

Ala Leu Asp Leu Phe Lys Phe Tyr Val Glu Asp Leu Lys Ala Arg Tyr
660 665 670

His Asp Glu Lys Lys Ile Ile Lys Asp Ile Leu Lys Asp Lys Gly Phe
675 680 685

Val Val Glu Val Asn Thr Thr Phe Glu Asp Phe Val Ala Ile Ile Ser
690 695 700

Ser Thr Lys Arg Ser Thr Thr Leu Asp Ala Gly Asn Ile Lys Leu Ala
705 710 715 720

Phe Asn Ser Leu Leu Glu Lys Ala Glu Ala Arg Glu Arg Glu Arg Glu
725 730 735

Lys Glu Glu Ala Arg Lys Met Lys Arg Lys Glu Ser Ala Phe Lys Ser
740 745 750

Met Leu Lys Gln Ala Ala Pro Pro Ile Glu Leu Asp Ala Val Trp Glu
755 760 765

Asp Ile Arg Glu Arg Phe Val Lys Glu Pro Ala Phe Glu Asp Ile Thr
770 775 780

Leu Glu Ser Glu Arg Lys Arg Ile Phe Lys Asp Phe Met His Val Leu
785 790 795 800

Glu His Glu Cys Gln His His His Ser Lys Asn Lys Lys His Ser Lys
805 810 815

Lys Ser Lys Lys His His Arg Lys Arg Ser Arg Ser Arg Ser Gly Ser
820 825 830

Asp Ser Asp Asp Asp Asp Ser His Ser Lys Lys Lys Arg Gln Arg Ser
835 840 845

Glu Ser Arg Ser Ala Ser Glu His Ser Ser Ser Ala Glu Ser Glu Arg
850 855 860

Ser Tyr Lys Lys Ser Lys Lys His Lys Lys Lys Ser Lys Lys Arg Arg
865 870 875 880

His Lys Ser Asp Ser Pro Glu Ser Asp Ala Glu Arg Glu Lys Asp Lys
885 890 895

Lys Glu Lys Asp Arg Glu Ser Glu Lys Asp Arg Thr Arg Gln Arg Ser
900 905 910

Glu Ser Lys His Lys Ser Pro Lys Lys Lys Thr Gly Lys Asp Ser Gly
915 920 925

Asn Trp Asp Thr Ser Gly Ser Glu Leu Ser Glu Gly Glu Leu Glu Lys
930 935 940

Arg Arg Arg Thr Leu Leu Glu Gln Leu Asp Asp Asp Gln
945 950 955

<210> 174
<211> 125
<212> PRT
<213> Homo sapiens

<400> 174

Met Glu Ser Lys Glu Lys Leu Ala Val Asn Ser Leu Ser Met Glu Asn
1 5 10 15

Ala Asn Gln Glu Asn Glu Glu Lys Glu Gln Val Ala Asn Lys Gly Glu
20 25 30

Pro Leu Ala Leu Pro Leu Asp Ala Gly Glu Tyr Cys Val Pro Arg Gly
35 40 45

Asn Arg Arg Arg Phe Arg Val Arg Gln Pro Ile Leu Gln Tyr Arg Trp
50 55 60

Asp Met Met His Arg Leu Gly Glu Pro Gln Ala Arg Met Arg Glu Glu
65 70 75 80

Asn Met Glu Arg Ile Gly Glu Gly Val Arg Gln Leu Met Glu Lys Leu
85 90 95

Arg Glu Lys Gln Leu Ser His Ser Leu Arg Ala Val Ser Thr Asp Pro
100 105 110

Pro His His Asp His His Asp Glu Phe Cys Leu Met Pro
115 120 125

<210> 175

<211> 864

<212> PRT

<213> Homo sapiens

<400> 175

Gln Val Gln His Gly Ser Asn Val Asn Ile His Arg Leu Val Glu Gly
1 5 10 15

Asn Val Val Ile Trp Glu Asn Ala Ser Thr Pro Leu Tyr Thr Gly Ala
20 25 30

Ile Val Thr Asn Asn Asp Gly Pro Tyr Met Ala Tyr Val Glu Val Leu
35 40 45

Gly Asp Pro Asn Leu Gln Phe Phe Ile Lys Ser Gly Asp Ala Trp Val
50 55 60

Thr Leu Ser Glu His Glu Tyr Leu Ala Lys Leu Gln Glu Ile Arg Gln
65 70 75 80

Ala Val His Ile Glu Ser Val Phe Ser Leu Asn Met Ala Phe Gln Leu
85 90 95

Glu Asn Asn Lys Tyr Glu Val Glu Thr His Ala Lys Asn Gly Ala Asn
100 105 110

Met Val Thr Phe Ile Pro Arg Asn Gly His Ile Cys Lys Met Val Tyr
115 120 125

His Lys Asn Val Arg Ile Tyr Lys Ala Thr Gly Asn Asp Thr Val Thr
130 135 140

Ser Val Val Gly Phe Phe Arg Gly Leu Arg Leu Leu Leu Ile Asn Val
145 150 155 160

Phe Ser Ile Asp Asp Asn Gly Met Met Ser Asn Arg Tyr Phe Gln His
165 170 175

Val Asp Asp Lys Tyr Val Pro Ile Ser Gln Lys Asn Tyr Glu Thr Gly
180 185 190

Ile Val Lys Leu Lys Asp Tyr Lys His Ala Tyr His Pro Val Asp Leu
195 200 205

Asp Ile Lys Asp Ile Asp Tyr Thr Met Phe His Leu Ala Asp Ala Thr
210 215 220

Tyr His Glu Pro Cys Phe Lys Ile Ile Pro Asn Thr Gly Phe Cys Ile
225 230 235 240

Thr Lys Leu Phe Asp Gly Asp Gln Val Leu Tyr Glu Ser Phe Asn Pro
245 250 255

Leu Ile His Cys Ile Asn Glu Val His Ile Tyr Asp Arg Asn Asn Gly
260 265 270

Ser Ile Ile Cys Leu His Leu Asn Tyr Ser Pro Pro Ser Tyr Lys Ala
275 280 285

Tyr Leu Val Leu Lys Asp Thr Gly Trp Glu Ala Thr Thr His Pro Leu
290 295 300

Leu Glu Glu Lys Ile Glu Glu Leu Gln Asp Gln Arg Ala Cys Glu Leu
305 310 315 320

Asp Val Asn Phe Ile Ser Asp Lys Asp Leu Tyr Val Ala Ala Leu Thr
325 330 335

Asn Ala Asp Leu Asn Tyr Thr Met Val Thr Pro Arg Pro His Arg Asp
340 345 350

Val Ile Arg Val Ser Asp Gly Ser Glu Val Leu Trp Tyr Tyr Glu Gly
 355 360 365

Leu Asp Asn Phe Leu Val Cys Ala Trp Ile Tyr Val Ser Asp Gly Val
 370 375 380

Ala Ser Leu Val His Leu Arg Ile Lys Asp Arg Ile Pro Ala Asn Asn
 385 390 395 400

Asp Ile Tyr Val Leu Lys Gly Asp Leu Tyr Trp Thr Arg Ile Thr Lys
 405 410 415

Ile Gln Phe Thr Gln Glu Ile Lys Arg Leu Val Lys Lys Ser Lys Lys
 420 425 430

Lys Leu Ala Pro Ile Thr Glu Glu Asp Ser Asp Lys His Asp Glu Pro
 435 440 445

Pro Glu Gly Pro Gly Ala Ser Gly Leu Pro Pro Lys Ala Pro Gly Asp
 450 455 460

Lys Glu Gly Ser Glu Gly His Lys Gly Pro Ser Lys Gly Ser Asp Ser
 465 470 475 480

Ser Lys Glu Gly Lys Lys Pro Gly Ser Gly Lys Lys Pro Gly Pro Ala
 485 490 495

Arg Glu His Lys Pro Ser Lys Ile Pro Thr Leu Ser Lys Lys Pro Ser
 500 505 510

Gly Pro Lys Asp Pro Lys His Pro Arg Asp Pro Lys Glu Pro Arg Lys
 515 520 525

Ser Lys Ser Pro Arg Thr Ala Ser Pro Thr Arg Arg Pro Ser Pro Lys
 530 535 540

Leu Pro Gln Leu Ser Lys Leu Pro Lys Ser Thr Ser Pro Arg Ser Pro
 545 550 555 560

Pro Pro Pro Thr Arg Pro Ser Ser Pro Glu Arg Pro Glu Gly Thr Lys
 565 570 575

Ile Ile Lys Thr Ser Lys Pro Pro Ser Pro Lys Pro Pro Phe Asp Pro
 580 585 590

Ser Phe Lys Glu Lys Phe Tyr Asp Asp Tyr Ser Lys Ala Ala Ser Arg
 595 600 605

Ser Lys Glu Thr Lys Thr Thr Val Val Leu Asp Glu Ser Phe Glu Ser
 610 615 620
 Ile Leu Lys Glu Thr Leu Pro Glu Thr Pro Gly Thr Pro Phe Thr Thr
 625 630 635 640
 Pro Arg Pro Val Pro Pro Lys Arg Pro Arg Thr Pro Glu Ser Pro Phe
 645 650 655
 Glu Pro Pro Lys Asp Pro Asp Ser Pro Ser Thr Ser Pro Ser Glu Phe
 660 665 670
 Phe Thr Pro Pro Glu Ser Lys Arg Thr Arg Phe His Glu Thr Pro Ala
 675 680 685
 Asp Thr Pro Leu Pro Asp Val Thr Ala Glu Leu Phe Lys Glu Pro Asp
 690 695 700
 Val Thr Ala Glu Thr Lys Ser Pro Asp Glu Ala Met Lys Arg Pro Arg
 705 710 715 720
 Ser Pro Ser Glu Tyr Glu Asp Thr Ser Pro Gly Asp Tyr Pro Ser Leu
 725 730 735
 Pro Met Lys Arg His Arg Leu Glu Arg Leu Arg Leu Thr Thr Thr Glu
 740 745 750
 Met Glu Thr Asp Pro Gly Arg Met Ala Lys Asp Ala Ser Gly Lys Pro
 755 760 765
 Val Lys Leu Lys Arg Ser Lys Ser Phe Asp Asp Leu Thr Thr Val Glu
 770 775 780
 Leu Ala Pro Glu Pro Lys Ala Ser Arg Ile Val Val Asp Asp Glu Gly
 785 790 795 800
 Thr Glu Ala Asp Asp Glu Glu Thr His Pro Pro Glu Glu Arg Gln Lys
 805 810 815
 Thr Glu Val Arg Arg Arg Arg Pro Pro Lys Lys Pro Ser Lys Ser Pro
 820 825 830
 Arg Pro Ser Lys Pro Lys Lys Pro Lys Lys Pro Asp Ser Ala Tyr Ile
 835 840 845
 Pro Ser Ile Leu Ala Ile Leu Val Val Ser Leu Ile Val Gly Ile Leu
 850 855 860

<210> 176
 <211> 333
 <212> PRT
 <213> Homo sapiens

<400> 176

Met Ser Trp Ile Lys Glu Gly Glu Leu Ser Leu Trp Glu Arg Phe Cys
 1 5 10 15
 Ala Asn Ile Ile Lys Ala Gly Pro Met Pro Lys His Ile Ala Phe Ile
 20 25 30
 Met Asp Gly Asn Arg Arg Tyr Ala Lys Lys Cys Gln Val Glu Arg Gln
 35 40 45
 Glu Gly His Ser Gln Gly Phe Asn Lys Leu Ala Glu Thr Leu Arg Trp
 50 55 60
 Cys Leu Asn Leu Gly Ile Leu Glu Val Thr Val Tyr Ala Phe Ser Ile
 65 70 75 80
 Glu Asn Phe Lys Arg Ser Lys Ser Glu Val Asp Gly Leu Met Asp Leu
 85 90 95
 Ala Arg Gln Lys Phe Ser Arg Leu Met Glu Glu Lys Glu Lys Leu Gln
 100 105 110
 Lys His Gly Val Cys Ile Arg Val Leu Gly Asp Leu His Leu Leu Pro
 115 120 125
 Leu Asp Leu Gln Glu Leu Ile Ala Gln Ala Val Gln Ala Thr Lys Asn
 130 135 140
 Tyr Asn Lys Cys Phe Leu Asn Val Cys Phe Ala Tyr Thr Ser Arg His
 145 150 155 160
 Glu Ile Ser Asn Ala Val Arg Glu Met Ala Trp Gly Val Glu Gln Gly
 165 170 175
 Leu Leu Asp Pro Ser Asp Ile Ser Glu Ser Leu Leu Asp Lys Cys Leu
 180 185 190
 Tyr Thr Asn Arg Ser Pro His Pro Asp Ile Leu Ile Arg Thr Ser Gly
 195 200 205
 Glu Val Arg Leu Ser Asp Phe Leu Leu Trp Gln Thr Ser His Ser Cys
 210 215 220

Leu Val Phe Gln Pro Val Leu Trp Pro Glu Tyr Thr Phe Trp Asn Leu
 225 230 235 240

Phe Glu Ala Ile Leu Gln Phe Gln Met Asn His Ser Val Leu Gln Lys
 245 250 255

Ala Arg Asp Met Tyr Ala Glu Glu Arg Lys Arg Gln Gln Leu Glu Arg
 260 265 270

Asp Gln Ala Thr Val Thr Glu Gln Leu Leu Arg Glu Gly Leu Gln Ala
 275 280 285

Ser Gly Asp Ala Gln Leu Arg Arg Thr Arg Leu His Lys Leu Ser Ala
 290 295 300

Arg Arg Glu Glu Arg Val Gln Gly Phe Leu Gln Ala Leu Glu Leu Lys
 305 310 315 320

Arg Ala Asp Trp Leu Ala Arg Leu Gly Thr Ala Ser Ala
 325 330

<210> 177
 <211> 897
 <212> PRT
 <213> Homo sapiens

<400> 177

Met Glu Tyr Thr Lys Gln Leu Ile Leu Ser Cys Leu Leu Asn Ile Cys
 1 5 10 15

Gln Lys Leu Ser Pro Asp Gly Gly Lys Ile Pro Lys Asp Ile Leu Asp
 20 25 30

Glu Glu Lys Phe Asn Val Glu Leu Ile Val Gln Cys Ile Arg Leu Ser
 35 40 45

Glu Met Pro Gln Thr His His His Ala Leu Leu Leu Leu Gly Thr Val
 50 55 60

Ala Gly Ile Phe Pro Asp Lys Val Leu His Asn Ile Met Ser Ile Phe
 65 70 75 80

Thr Phe Met Gly Ala Asn Val Met Arg Leu Asp Asp Thr Tyr Ser Phe
 85 90 95

Gln Val Ile Asn Lys Thr Val Lys Met Val Ile Pro Ala Leu Ile Gln
 100 105 110

Ser Asp Ser Gly Asp Ser Ile Glu Val Ser Arg Asn Val Glu Glu Ile
 115 120 125
 Val Val Lys Ile Ile Ser Val Phe Val Asp Ala Leu Pro His Val Pro
 130 135 140
 Glu His Arg Arg Leu Pro Ile Leu Val Gln Leu Val Asp Thr Leu Gly
 145 150 155 160
 Ala Glu Lys Phe Leu Trp Ile Leu Leu Ile Leu Leu Phe Glu Gln Tyr
 165 170 175
 Val Thr Lys Thr Val Leu Ala Ala Ala Tyr Gly Glu Lys Asp Ala Ile
 180 185 190
 Leu Glu Ala Asp Thr Glu Phe Trp Phe Ser Val Cys Cys Glu Phe Ser
 195 200 205
 Val Gln His Gln Ile Gln Ser Leu Met Asn Ile Leu Gln Tyr Leu Leu
 210 215 220
 Lys Leu Pro Glu Glu Lys Glu Glu Thr Ile Pro Lys Ala Val Ser Phe
 225 230 235 240
 Asn Lys Ser Glu Ser Gln Glu Glu Met Leu Gln Val Phe Asn Val Glu
 245 250 255
 Thr His Thr Ser Lys Gln Leu Arg His Phe Lys Phe Leu Ser Val Ser
 260 265 270
 Phe Met Ser Gln Leu Leu Ser Ser Asn Asp Phe Leu Lys Lys Val Val
 275 280 285
 Glu Ser Gly Gly Pro Glu Ile Leu Lys Gly Leu Glu Glu Arg Leu Leu
 290 295 300
 Glu Thr Val Leu Gly Tyr Ile Ser Ala Val Ala Gln Ser Met Glu Arg
 305 310 315 320
 Asn Ala Asp Lys Leu Thr Val Lys Phe Trp Arg Ala Leu Leu Ser Lys
 325 330 335
 Ala Tyr Asp Leu Leu Asp Lys Val Asn Ala Leu Leu Pro Thr Glu Thr
 340 345 350
 Phe Ile Pro Val Ile Arg Gly Leu Val Gly Asn Pro Leu Pro Ser Val
 355 360 365

Arg Arg Lys Ala Leu Asp Leu Leu Asn Asn Lys Leu Gln Gln Asn Ile
 370 375 380
 Ser Trp Lys Lys Thr Ile Val Thr Arg Phe Leu Lys Leu Val Pro Asp
 385 390 395 400
 Leu Leu Ala Ile Val Gln Arg Lys Lys Lys Glu Gly Glu Glu Glu Gln
 405 410 415
 Ala Ile Asn Arg Gln Thr Ala Leu Tyr Thr Leu Lys Leu Leu Cys Lys
 420 425 430
 Asn Phe Gly Ala Glu Asn Pro Asp Pro Phe Val Pro Val Leu Ser Thr
 435 440 445
 Ala Val Lys Leu Ile Ala Pro Glu Arg Lys Glu Glu Lys Asn Val Leu
 450 455 460
 Gly Ser Ala Leu Leu Cys Ile Ala Glu Val Thr Ser Thr Leu Glu Ala
 465 470 475 480
 Leu Ala Ile Pro Gln Leu Pro Ser Leu Met Pro Ser Leu Leu Thr Thr
 485 490 495
 Met Lys Asn Thr Ser Glu Leu Val Ser Ser Glu Val Tyr Leu Leu Ser
 500 505 510
 Ala Leu Ala Ala Leu Gln Lys Val Val Glu Thr Leu Pro His Phe Ile
 515 520 525
 Ser Pro Tyr Leu Glu Gly Ile Leu Ser Gln Val Ile His Leu Glu Lys
 530 535 540
 Ile Thr Ser Glu Met Gly Ser Ala Ser Arg Ala Asn Ile Arg Leu Thr
 545 550 555 560
 Ser Leu Lys Lys Thr Leu Ala Thr Thr Leu Ala Pro Arg Val Leu Leu
 565 570 575
 Pro Ala Ile Lys Lys Thr Tyr Lys Gln Ile Glu Lys Asn Trp Lys Asn
 580 585 590
 His Met Gly Pro Phe Met Ser Ile Leu Gln Glu His Ile Gly Ala Met
 595 600 605
 Lys Lys Glu Glu Leu Thr Ser His Gln Ser Gln Leu Thr Ala Phe Phe
 610 615 620

Leu Glu Ala Leu Asp Phe Arg Ala Gln His Ser Glu Asn Asp Leu Glu
 625 630 635 640
 Glu Val Gly Lys Thr Glu Asn Cys Ile Ile Asp Cys Leu Val Ala Met
 645 650 655
 Val Val Lys Leu Ser Glu Val Thr Phe Arg Pro Leu Phe Phe Lys Leu
 660 665 670
 Phe Asp Trp Ala Lys Thr Glu Asp Ala Pro Lys Asp Arg Leu Leu Thr
 675 680 685
 Phe Tyr Asn Leu Ala Asp Cys Ile Ala Glu Lys Leu Lys Gly Leu Phe
 690 695 700
 Thr Leu Phe Ala Gly His Leu Val Lys Pro Phe Ala Asp Thr Leu Asp
 705 710 715 720
 Gln Val Asn Ile Ser Lys Thr Asp Glu Ala Phe Phe Asp Ser Glu Asn
 725 730 735
 Asp Pro Glu Lys Cys Cys Leu Leu Leu Gln Phe Ile Leu Asn Cys Leu
 740 745 750
 Tyr Lys Ile Phe Leu Phe Asp Thr Gln His Phe Ile Ser Lys Glu Arg
 755 760 765
 Ala Gly Ala Leu Met Met Pro Leu Val Asp Gln Leu Val Asn Arg Leu
 770 775 780
 Gly Gly Glu Glu Lys Phe Gln Glu Arg Val Thr Lys His Leu Ile Pro
 785 790 795 800
 Cys Ile Ala Gln Phe Ser Val Ala Met Ala Asp Asp Ser Leu Trp Lys
 805 810 815
 Pro Leu Asn Tyr Gln Ile Leu Leu Lys Thr Arg Asp Ser Ser Pro Lys
 820 825 830
 Val Arg Phe Ala Ala Leu Ile Thr Val Leu Ala Leu Ala Glu Lys Leu
 835 840 845
 Lys Glu Asn Tyr Ile Val Leu Leu Pro Glu Ser Ile Pro Phe Leu Ala
 850 855 860
 Glu Leu Met Glu Asp Glu Cys Glu Glu Val Glu His Gln Cys Gln Lys
 865 870 875 880

Thr Ile Gln Gln Leu Glu Thr Val Leu Gly Glu Pro Leu Gln Ser Tyr
885 890 895

Phe

<210> 178
<211> 104
<212> PRT
<213> Homo sapiens

<400> 178

Met Gly Gln Cys Arg Ser Ala Asn Ala Glu Asp Ala Gln Glu Phe Ser
1 5 10 15

Asp Val Glu Arg Ala Ile Glu Thr Leu Ile Lys Asn Phe His Gln Tyr
20 25 30

Ser Val Glu Gly Gly Lys Glu Thr Leu Thr Pro Ser Glu Leu Arg Asp
35 40 45

Leu Val Thr Gln Gln Leu Pro His Leu Met Pro Ser Asn Cys Gly Leu
50 55 60

Glu Glu Lys Ile Ala Asn Leu Gly Ser Cys Asn Asp Ser Lys Leu Glu
65 70 75 80

Phe Arg Ser Phe Trp Glu Leu Ile Gly Glu Ala Ala Lys Ser Val Lys
85 90 95

Leu Glu Arg Pro Val Arg Gly His
100

<210> 179
<211> 943
<212> PRT
<213> Homo sapiens

<400> 179

Met Gly Leu Thr Lys Gln Tyr Leu Arg Tyr Val Ala Ser Ala Val Phe
1 5 10 15

Gly Val Ile Gly Ser Gln Lys Gly Asn Ile Val Phe Val Thr Leu Arg
20 25 30

Gly Glu Lys Gly Arg Tyr Val Ala Val Pro Ala Cys Glu His Val Phe
35 40 45

Ile Trp Asp Leu Arg Lys Gly Glu Lys Ile Leu Ile Leu Gln Gly Leu
50 55 60

Lys Gln Glu Val Thr Cys Leu Cys Pro Ser Pro Asp Gly Leu His Leu
65 70 75 80

Ala Val Gly Tyr Glu Asp Gly Ser Ile Arg Ile Phe Ser Leu Leu Ser
85 90 95

Gly Glu Gly Asn Val Thr Phe Asn Gly His Lys Ala Ala Ile Thr Thr
100 105 110

Leu Lys Tyr Asp Gln Leu Gly Gly Arg Leu Ala Ser Gly Ser Lys Asp
115 120 125

Thr Asp Ile Ile Val Trp Asp Val Ile Asn Glu Ser Gly Leu Tyr Arg
130 135 140

Leu Lys Gly His Lys Asp Ala Ile Thr Gln Ala Leu Phe Leu Arg Glu
145 150 155 160

Lys Asn Leu Leu Val Thr Ser Gly Lys Asp Thr Met Val Lys Trp Trp
165 170 175

Asp Leu Asp Thr Gln His Cys Phe Lys Thr Met Val Gly His Arg Thr
180 185 190

Glu Val Trp Gly Leu Val Leu Leu Ser Glu Glu Lys Arg Leu Ile Thr
195 200 205

Gly Ala Ser Asp Ser Glu Leu Arg Val Trp Asp Ile Ala Tyr Leu Gln
210 215 220

Glu Ile Glu Asp Pro Glu Glu Pro Asp Pro Lys Lys Ile Lys Gly Ser
225 230 235 240

Ser Pro Gly Ile Gln Asp Thr Leu Glu Ala Glu Asp Gly Ala Phe Glu
245 250 255

Thr Asp Glu Ala Pro Glu Asp Arg Ile Leu Ser Cys Arg Lys Ala Gly
260 265 270

Ser Ile Met Arg Glu Gly Arg Asp Arg Val Val Asn Leu Ala Val Asp
275 280 285

Lys Thr Gly Arg Ile Leu Ala Cys His Gly Thr Asp Ser Val Leu Glu
290 295 300

Leu Phe Cys Ile Leu Ser Lys Lys Glu Ile Gln Lys Lys Met Asp Lys
305 310 315 320

Lys Met Lys Lys Ala Arg Lys Lys Ala Lys Leu His Ser Ser Lys Gly
325 330 335

Glu Glu Glu Asp Pro Glu Val Asn Val Glu Met Ser Leu Gln Asp Glu
340 345 350

Ile Gln Arg Val Thr Asn Ile Lys Thr Ser Ala Lys Ile Lys Ser Phe
355 360 365

Asp Leu Ile His Ser Pro His Gly Glu Leu Lys Ala Val Phe Leu Leu
370 375 380

Gln Asn Asn Leu Val Glu Leu Tyr Ser Leu Asn Pro Ser Leu Pro Thr
385 390 395 400

Pro Gln Pro Val Arg Thr Ser Arg Ile Thr Ile Gly Gly His Arg Ser
405 410 415

Asp Val Arg Thr Leu Ser Phe Ser Ser Asp Asn Ile Ala Val Leu Ser
420 425 430

Ala Ala Ala Asp Ser Ile Lys Ile Trp Asn Arg Ser Thr Leu Gln Cys
435 440 445

Ile Arg Thr Met Thr Cys Glu Tyr Ala Leu Cys Ser Phe Phe Val Pro
450 455 460

Gly Asp Arg Gln Val Val Ile Gly Thr Lys Thr Gly Lys Leu Gln Leu
465 470 475 480

Tyr Asp Leu Ala Ser Gly Asn Leu Leu Glu Thr Ile Asp Ala His Asp
485 490 495

Gly Ala Leu Trp Ser Met Ser Leu Ser Pro Asp Gln Arg Gly Phe Val
500 505 510

Thr Gly Gly Ala Asp Lys Ser Val Lys Phe Trp Asp Phe Glu Leu Val
515 520 525

Lys Asp Glu Asn Ser Thr Gln Lys Arg Leu Ser Val Lys Gln Thr Arg
530 535 540

Thr Leu Gln Leu Asp Glu Asp Val Leu Cys Val Ser Tyr Ser Pro Asn
545 550 555 560

Gln Lys Leu Leu Ala Val Ser Leu Leu Asp Cys Thr Val Lys Ile Phe
565 570 575

Tyr Val Asp Thr Leu Lys Phe Phe Leu Ser Leu Tyr Gly His Lys Leu
 580 585 590

Pro Val Ile Cys Met Asp Ile Ser His Asp Gly Ala Leu Ile Ala Thr
 595 600 605

Gly Ser Ala Asp Arg Asn Val Lys Ile Trp Gly Leu Asp Phe Gly Asp
 610 615 620

Cys His Lys Ser Leu Phe Ala His Asp Asp Ser Val Met Tyr Leu Gln
 625 630 635 640

Phe Val Pro Lys Ser His Leu Phe Phe Thr Ala Gly Lys Asp His Lys
 645 650 655

Ile Lys Gln Trp Asp Ala Asp Lys Phe Glu His Ile Gln Thr Leu Glu
 660 665 670

Gly His His Gln Glu Ile Trp Cys Leu Ala Val Ser Pro Ser Gly Asp
 675 680 685

Tyr Val Val Ser Ser Ser His Asp Lys Ser Leu Arg Leu Trp Glu Arg
 690 695 700

Thr Arg Glu Pro Leu Ile Leu Glu Glu Glu Arg Glu Met Glu Arg Glu
 705 710 715 720

Ala Glu Tyr Glu Glu Ser Val Ala Lys Glu Asp Gln Pro Ala Val Pro
 725 730 735

Gly Glu Thr Gln Gly Asp Ser Tyr Phe Thr Gly Lys Lys Thr Ile Glu
 740 745 750

Thr Val Lys Ala Ala Glu Arg Ile Met Glu Ala Ile Glu Leu Tyr Arg
 755 760 765

Glu Glu Thr Ala Lys Met Lys Glu His Lys Ala Ile Cys Lys Ala Ala
 770 775 780

Gly Lys Glu Val Pro Leu Pro Ser Asn Pro Ile Leu Met Ala Tyr Gly
 785 790 795 800

Ser Ile Ser Pro Ser Ala Tyr Val Leu Glu Ile Phe Lys Gly Ile Lys
 805 810 815

Ser Ser Glu Leu Glu Glu Ser Leu Leu Val Leu Pro Phe Ser Tyr Val
 820 825 830

Pro Asp Ile Leu Lys Leu Phe Asn Glu Phe Ile Gln Leu Gly Ser Asp
835 840 845

Val Glu Leu Ile Cys Arg Cys Leu Phe Phe Leu Leu Arg Ile His Phe
850 855 860

Gly Gln Ile Thr Ser Asn Gln Met Leu Val Pro Val Ile Glu Lys Leu
865 870 875 880

Arg Glu Thr Thr Ile Ser Lys Val Ser Gln Val Arg Asp Val Ile Gly
885 890 895

Phe Asn Met Ala Gly Leu Asp Tyr Leu Lys Arg Glu Cys Glu Ala Lys
900 905 910

Ser Glu Val Met Phe Phe Ala Asp Ala Thr Ser His Leu Glu Glu Lys
915 920 925

Lys Arg Lys Arg Lys Lys Arg Glu Lys Leu Ile Leu Thr Leu Thr
930 935 940

<210> 180
<211> 150
<212> PRT
<213> Homo sapiens
<400> 180

Ile Gly Ala Pro Arg Gly Arg Trp Leu His Ser Leu Gly Gly Gly Asp
1 5 10 15

Gln Ser His Val Met Ser Val Val Arg Ser Ser Val His Ala Arg Trp
20 25 30

Ile Val Gly Lys Val Ile Gly Thr Lys Met Gln Lys Thr Ala Lys Val
35 40 45

Arg Val Thr Arg Leu Val Leu Asp Pro Tyr Leu Leu Lys Tyr Phe Asn
50 55 60

Lys Arg Lys Thr Tyr Phe Ala His Asp Ala Leu Gln Gln Cys Thr Val
65 70 75 80

Gly Asp Ile Val Leu Leu Arg Ala Leu Pro Val Pro Arg Ala Lys His
85 90 95

Val Lys His Glu Leu Ala Glu Ile Val Phe Lys Val Gly Lys Val Ile
100 105 110

Asp Pro Val Thr Gly Lys Pro Cys Ala Gly Thr Thr Tyr Leu Glu Ser
115 120 125

Pro Leu Ser Ser Glu Thr Thr Gln Leu Ser Lys Asn Leu Glu Glu Leu
130 135 140

Asn Ile Ser Ser Ala Gln
145 150

<210> 181
<211> 661
<212> PRT
<213> Homo sapiens

<400> 181

Met Glu Met Thr Glu Met Thr Gly Val Ser Leu Lys Arg Gly Ala Leu
1 5 10 15

Val Val Glu Asp Asn Asp Ser Gly Val Pro Val Glu Glu Thr Lys Lys
20 25 30

Gln Lys Leu Ser Glu Cys Ser Leu Thr Lys Gly Gln Asp Gly Leu Gln
35 40 45

Asn Asp Phe Leu Ser Ile Ser Glu Asp Val Pro Arg Pro Pro Asp Thr
50 55 60

Val Ser Thr Gly Lys Gly Gly Lys Asn Ser Glu Ala Gln Leu Glu Asp
65 70 75 80

Glu Glu Glu Glu Glu Glu Asp Gly Leu Ser Glu Glu Cys Glu Glu Glu
85 90 95

Glu Ser Glu Ser Phe Ala Asp Met Met Lys His Gly Leu Thr Glu Ala
100 105 110

Asp Val Gly Ile Thr Lys Phe Val Ser Ser His Gln Gly Phe Ser Gly
115 120 125

Ile Leu Lys Glu Arg Tyr Ser Asp Phe Val Val His Glu Ile Gly Lys
130 135 140

Asp Gly Arg Ile Ser His Leu Asn Asp Leu Ser Ile Pro Val Asp Glu
145 150 155 160

Glu Asp Pro Ser Glu Asp Ile Phe Thr Val Leu Thr Ala Glu Glu Lys
165 170 175

Gln Arg Leu Glu Glu Leu Gln Leu Phe Lys Asn Lys Glu Thr Ser Val
 180 185 190
 Ala Ile Glu Val Ile Glu Asp Thr Lys Glu Lys Arg Thr Ile Ile His
 195 200 205
 Gln Ala Ile Lys Ser Leu Phe Pro Gly Leu Glu Thr Lys Thr Glu Asp
 210 215 220
 Arg Glu Gly Lys Lys Tyr Ile Val Ala Tyr His Ala Ala Gly Lys Lys
 225 230 235 240
 Ala Leu Ala Asn Pro Arg Lys His Ser Trp Pro Lys Ser Arg Gly Ser
 245 250 255
 Tyr Cys His Phe Val Leu Tyr Lys Glu Asn Lys Asp Thr Met Asp Ala
 260 265 270
 Ile Asn Val Leu Ser Lys Tyr Leu Arg Val Lys Pro Asn Ile Phe Ser
 275 280 285
 Tyr Met Gly Thr Lys Asp Lys Arg Ala Ile Thr Val Gln Glu Ile Ala
 290 295 300
 Val Leu Lys Ile Thr Ala Gln Arg Leu Ala His Leu Asn Lys Cys Leu
 305 310 315 320
 Met Asn Phe Lys Leu Gly Asn Phe Ser Tyr Gln Lys Asn Pro Leu Lys
 325 330 335
 Leu Gly Glu Leu Gln Gly Asn His Phe Thr Val Val Leu Arg Asn Ile
 340 345 350
 Thr Gly Thr Asp Asp Gln Val Gln Gln Ala Met Asn Ser Leu Lys Glu
 355 360 365
 Ile Gly Phe Ile Asn Tyr Tyr Gly Met Gln Arg Phe Gly Thr Thr Ala
 370 375 380
 Val Pro Thr Tyr Gln Val Gly Arg Ala Ile Leu Gln Asn Ser Trp Thr
 385 390 395 400
 Glu Val Met Asp Leu Ile Leu Lys Pro Arg Ser Gly Ala Glu Lys Gly
 405 410 415
 Tyr Leu Val Lys Cys Arg Glu Glu Trp Ala Lys Thr Lys Asp Pro Thr
 420 425 430

Ala Ala Leu Arg Lys Leu Pro Val Lys Arg Cys Val Glu Gly Gln Leu
 435 440 445
 Leu Arg Gly Leu Ser Lys Tyr Gly Met Lys Asn Ile Val Ser Ala Phe
 450 455 460
 Gly Ile Ile Pro Arg Asn Asn Arg Leu Met Tyr Ile His Ser Tyr Gln
 465 470 475 480
 Ser Tyr Val Trp Asn Asn Met Val Ser Lys Arg Ile Glu Asp Tyr Gly
 485 490 495
 Leu Lys Pro Val Pro Gly Asp Leu Val Leu Lys Gly Ala Thr Ala Thr
 500 505 510
 Tyr Ile Glu Glu Asp Asp Val Asn Asn Tyr Ser Ile His Asp Val Val
 515 520 525
 Met Pro Leu Pro Gly Phe Asp Val Ile Tyr Pro Lys His Lys Ile Gln
 530 535 540
 Glu Ala Tyr Arg Glu Met Leu Thr Ala Asp Asn Leu Asp Ile Asp Asn
 545 550 555 560
 Met Arg His Lys Ile Arg Asp Tyr Ser Leu Ser Gly Ala Tyr Arg Lys
 565 570 575
 Ile Ile Ile Arg Pro Gln Asn Val Ser Trp Glu Val Val Ala Tyr Asp
 580 585 590
 Asp Pro Lys Ile Pro Leu Phe Asn Thr Asp Val Asp Asn Leu Glu Gly
 595 600 605
 Lys Thr Pro Pro Val Phe Ala Ser Glu Gly Lys Tyr Arg Ala Leu Lys
 610 615 620
 Met Asp Phe Ser Leu Pro Pro Ser Thr Tyr Ala Thr Met Ala Ile Arg
 625 630 635 640
 Glu Val Leu Lys Met Asp Thr Ser Ile Lys Asn Gln Thr Gln Leu Asn
 645 650 655
 Thr Thr Trp Leu Arg
 660

<210> 182
 <211> 396
 <212> PRT
 <213> Homo sapiens

<400> 182

Met Pro Pro Lys Lys Gly Gly Asp Gly Ile Lys Pro Pro Pro Ile Ile
1 5 10 15

Gly Arg Phe Gly Thr Ser Leu Lys Ile Gly Ile Val Gly Leu Pro Asn
20 25 30

Val Gly Lys Ser Thr Phe Phe Asn Val Leu Thr Asn Ser Gln Ala Ser
35 40 45

Ala Glu Asn Phe Pro Phe Cys Thr Ile Asp Pro Asn Glu Ser Arg Val
50 55 60

Pro Val Pro Asp Glu Arg Phe Asp Phe Leu Cys Gln Tyr His Lys Pro
65 70 75 80

Ala Ser Lys Ile Pro Ala Phe Leu Asn Val Val Asp Ile Ala Gly Leu
85 90 95

Val Lys Gly Ala His Asn Gly Gln Gly Leu Gly Asn Ala Phe Leu Ser
100 105 110

His Ile Ser Ala Cys Asp Gly Ile Phe His Leu Thr Arg Ala Phe Glu
115 120 125

Asp Asp Asp Ile Thr His Val Glu Gly Ser Val Asp Pro Ile Arg Asp
130 135 140

Ile Glu Ile Ile His Glu Glu Leu Gln Leu Lys Asp Glu Glu Met Ile
145 150 155 160

Gly Pro Ile Ile Asp Lys Leu Glu Lys Val Ala Val Arg Gly Gly Asp
165 170 175

Lys Lys Leu Lys Pro Glu Tyr Asp Ile Met Cys Lys Val Lys Ser Trp
180 185 190

Val Ile Asp Gln Lys Lys Pro Val Arg Phe Tyr His Asp Trp Asn Asp
195 200 205

Lys Glu Ile Glu Val Leu Asn Lys His Leu Phe Leu Thr Ser Lys Pro
210 215 220

Met Val Tyr Leu Val Asn Leu Ser Glu Lys Asp Tyr Ile Arg Lys Lys
225 230 235 240

Asn Lys Trp Leu Ile Lys Ile Lys Glu Trp Val Asp Lys Tyr Asp Pro
Page 496

245

250

255

Gly Ala Leu Val Ile Pro Phe Ser Gly Ala Leu Glu Leu Lys Leu Gln
260 265 270

Glu Leu Ser Ala Glu Glu Arg Gln Lys Tyr Leu Glu Ala Asn Met Thr
275 280 285

Gln Ser Ala Leu Pro Lys Ile Ile Lys Ala Gly Phe Ala Ala Leu Gln
290 295 300

Leu Glu Tyr Phe Phe Thr Ala Gly Pro Asp Glu Val Arg Ala Trp Thr
305 310 315 320

Ile Arg Lys Gly Thr Lys Ala Pro Gln Ala Ala Gly Lys Ile His Thr
325 330 335

Asp Phe Glu Lys Gly Phe Ile Met Ala Glu Val Met Lys Tyr Glu Asp
340 345 350

Phe Lys Glu Glu Gly Ser Glu Asn Ala Val Lys Ala Ala Gly Lys Tyr
355 360 365

Arg Gln Gln Gly Arg Asn Tyr Ile Val Glu Asp Gly Asp Ile Ile Phe
370 375 380

Phe Lys Phe Asn Thr Pro Gln Gln Pro Lys Lys Lys
385 390 395

<210> 183
<211> 62
<212> PRT
<213> Homo sapiens

<400> 183

Pro Gly Leu Val Asp Ser Asn Pro Ala Pro Pro Glu Ser Gln Glu Lys
1 5 10 15

Lys Pro Leu Lys Pro Cys Cys Ala Cys Pro Glu Thr Lys Lys Ala Arg
20 25 30

Asp Ala Cys Ile Ile Glu Lys Gly Glu Glu His Cys Gly His Leu Ile
35 40 45

Glu Ala His Lys Glu Cys Met Arg Ala Leu Gly Phe Lys Ile
50 55 60

<210> 184
<211> 182

<212> PRT
<213> Homo sapiens

<400> 184

Met Pro Leu Ser Gln Ile Lys Lys Val Leu Asp Ile Arg Glu Thr Glu
1 5 10 15

Asp Cys His Asn Ala Phe Ala Leu Leu Val Arg Pro Pro Thr Glu Gln
20 25 30

Ala Asn Val Leu Leu Ser Phe Gln Met Thr Ser Asp Glu Leu Pro Lys
35 40 45

Glu Asn Trp Leu Lys Met Leu Cys Arg His Val Ala Asn Thr Ile Cys
50 55 60

Lys Ala Asp Ala Glu Asn Leu Ile Tyr Thr Ala Asp Pro Glu Ser Phe
65 70 75 80

Glu Val Asn Thr Lys Asp Met Asp Ser Thr Leu Ser Arg Ala Ser Arg
85 90 95

Ala Ile Lys Lys Thr Ser Lys Lys Val Thr Arg Ala Phe Ser Phe Ser
100 105 110

Lys Thr Pro Lys Arg Ala Leu Arg Arg Ala Leu Met Thr Ser His Gly
115 120 125

Ser Val Glu Gly Arg Ser Pro Ser Ser Asn Asp Lys His Val Met Ser
130 135 140

Arg Leu Ser Ser Thr Ser Ser Leu Ala Gly Ile Pro Ser Pro Ser Leu
145 150 155 160

Val Ser Leu Pro Ser Phe Phe Glu Arg Arg Ser His Thr Leu Ser Arg
165 170 175

Ser Thr Thr His Leu Ile
180

<210> 185
<211> 583
<212> PRT
<213> Homo sapiens

<400> 185

Pro Leu Lys Glu Gly Arg Val Arg Glu Ile Met Thr Phe Leu Val Asn
1 5 10 15

Asp Val Leu Lys His Gln Ala Ile Leu Leu Gly Asn Ala Glu Glu Gln
 20 25 30
 Lys Lys Lys Lys Arg Ser Leu Trp Asp Thr Ile Lys Lys Lys Lys Ile
 35 40 45
 Ser Ala Ser Thr Ser His Asn Arg Arg Val Ser Asn Ile Gln Asn Val
 50 55 60
 Asn Lys Thr Phe Ser Val Ser Gln Lys Val Asp Arg Val Arg Ser Pro
 65 70 75 80
 Leu Gln Ala Cys Glu Asn Leu Ala Met Asn Glu Gly Gly Pro Pro Thr
 85 90 95
 Glu Asn Asn Ser Leu Ile Leu Glu Glu Asn Lys Ile Pro Ile Ser Pro
 100 105 110
 Ile Ser Pro Ala Phe Asn Glu Cys His Gly Ala Thr Cys Leu Pro Leu
 115 120 125
 Ser Val Arg Arg Ser Thr Thr Tyr Ser Ser Leu His Ala Ser Glu Asn
 130 135 140
 Arg Glu Leu Leu Asn Val His Ser Ala Asn Val Ser Lys Val Ser Phe
 145 150 155 160
 Asn Glu Lys Ala Val Thr Glu Thr Ser Phe Asn Ser Val Asn Val Asn
 165 170 175
 Gly Gln Arg Gly Glu Asn Ser Lys Leu Ser Leu Thr Pro Asn Cys Ser
 180 185 190
 Ser Thr Leu Asn Ile Thr Gln Ser Gln Ile His Phe Leu Ser Pro Asp
 195 200 205
 Ser Phe Val Asn Asn Ser His Gly Ala Asn Asn Glu Leu Glu Leu Val
 210 215 220
 Thr Cys Leu Ser Ser Asp Met Phe Met Lys Asp Asn Ser Gln Pro Val
 225 230 235 240
 His Leu Glu Ser Thr Ile Ala His Glu Ile Tyr Gln Lys Ile Leu Ser
 245 250 255
 Pro Asp Ser Phe Ile Lys Asp Asn Tyr Gly Leu Asn Gln Asp Leu Glu
 260 265 270

Ser Glu Ser Val Asn Pro Ile Leu Ser Pro Asn Gln Phe Leu Lys Asp
 275 280 285
 Asn Met Ala Tyr Met Cys Thr Ser Gln Gln Thr Cys Lys Val Pro Leu
 290 295 300
 Ser Asn Glu Asn Ser Gln Val Pro Gln Ser Pro Glu Asp Trp Arg Lys
 305 310 315 320
 Ser Glu Val Ser Pro Arg Ile Pro Glu Cys Gln Gly Ser Lys Ser Pro
 325 330 335
 Lys Ala Ile Phe Glu Glu Leu Val Glu Met Lys Ser Asn Tyr Tyr Ser
 340 345 350
 Phe Ile Lys Gln Asn Asn Pro Lys Phe Ser Ala Val Gln Asp Ile Ser
 355 360 365
 Ser His Ser His Asn Lys Gln Pro Lys Arg Arg Pro Ile Leu Ser Ala
 370 375 380
 Thr Val Thr Lys Arg Lys Ala Thr Cys Thr Arg Glu Asn Gln Thr Glu
 385 390 395 400
 Ile Asn Lys Pro Lys Ala Lys Arg Cys Leu Asn Ser Ala Val Gly Glu
 405 410 415
 His Glu Lys Val Ile Asn Asn Gln Lys Glu Lys Glu Asp Phe His Ser
 420 425 430
 Tyr Leu Pro Ile Ile Asp Pro Ile Leu Ser Lys Ser Lys Ser Tyr Lys
 435 440 445
 Asn Glu Val Thr Pro Ser Ser Thr Thr Ala Ser Val Ala Arg Lys Arg
 450 455 460
 Lys Ser Asp Gly Ser Met Glu Asp Ala Asn Val Arg Val Ala Ile Thr
 465 470 475 480
 Glu His Thr Glu Val Arg Glu Ile Lys Arg Ile His Phe Ser Pro Ser
 485 490 495
 Glu Pro Lys Thr Ser Ala Val Lys Lys Thr Lys Asn Val Thr Thr Pro
 500 505 510
 Ile Ser Lys Arg Ile Ser Asn Arg Glu Lys Leu Asn Leu Lys Lys Lys
 515 520 525

Thr Asp Leu Ser Ile Phe Arg Thr Pro Ile Ser Lys Thr Asn Lys Arg
530 535 540

Thr Lys Pro Ile Ile Ala Val Ala Gln Ser Ser Leu Thr Phe Ile Lys
545 550 555 560

Pro Leu Lys Thr Asp Ile Pro Arg His Pro Met Pro Phe Ala Ala Lys
565 570 575

Asn Met Phe Tyr Asp Glu Arg
580

<210> 186
<211> 749
<212> PRT
<213> Homo sapiens

<400> 186

Met Ala Leu Pro Leu Leu Pro Gly Asn Ser Phe Asn Arg Asn Val Gly
1 5 10 15

Lys Glu Lys Phe His Lys Ser Gln His Trp Gly Phe Cys Asn Asn Val
20 25 30

Met Met Leu Val Ser Asp Glu Lys Pro Gly Ile Gly Gly Glu Pro Leu
35 40 45

Leu Gly Gln Lys Ile Lys Pro Lys Cys Ser Ile Tyr Pro Lys Gly Asp
50 55 60

Gly Ser Asp Val Pro Ser Trp Val Ala Phe Asp Lys Gln Val Leu Ser
65 70 75 80

Phe Asp Ala Tyr Leu Glu Glu Glu Val Leu Asp Lys Ser Gln Thr Asn
85 90 95

Tyr Arg Ile Arg Tyr Tyr Lys Ile Tyr Phe Tyr Pro Glu Asp Asp Thr
100 105 110

Ile Gln Val Asn Glu Pro Glu Val Lys Asn Ser Gly Leu Leu Gln Gly
115 120 125

Thr Ser Ile Arg Arg His Arg Ile Thr Leu Pro Pro Pro Asp Glu Asp
130 135 140

Gln Phe Tyr Thr Val Tyr His Phe Asn Val Gly Thr Glu Val Val Phe
145 150 155 160

Tyr Gly Arg Thr Phe Lys Ile Tyr Asp Cys Asp Ala Phe Thr Arg Asn
Page 501

165

170

175

Phe Leu Arg Lys Ile Gly Val Lys Val Asn Pro Pro Val Gln Cys Pro
 180 185 190

Glu Asp Pro Tyr Met Lys Ile Arg Arg Glu Val Val Glu His Val Glu
 195 200 205

Pro Leu Arg Pro Tyr Glu Ser Leu Asp Thr Leu Lys Gln Phe Leu Gln
 210 215 220

Tyr His Gly Lys Ile Leu Cys Phe Phe Cys Leu Trp Asp Asp Ser Val
 225 230 235 240

Ser Met Phe Gly Asp Arg Arg Glu Leu Ile Leu His Tyr Phe Leu Cys
 245 250 255

Asp Asp Thr Ile Glu Ile Lys Glu Leu Leu Pro His Ser Ser Gly Arg
 260 265 270

Asp Ala Leu Lys Met Phe Leu Arg Arg Ser Lys Leu Pro Lys Asn Cys
 275 280 285

Pro Pro Arg Val Tyr Gln Pro Gly Gln Ile Thr Asp Arg Ala Val Leu
 290 295 300

Asn Ser Tyr Gly Asp Phe Ile Lys Asn Gln Ala Asp Gly Tyr Leu Phe
 305 310 315 320

Asp Arg Tyr Lys Leu Gly Lys Val Asp Gln Glu Phe Tyr Lys Asp Ser
 325 330 335

Asp Leu Ser Leu Gly Val Thr Ile Asn Val Trp Gly Arg Lys Val Leu
 340 345 350

Leu Tyr Asp Cys Asp Glu Phe Thr Lys Ser Tyr Tyr Lys Ser Lys Tyr
 355 360 365

Gly Ile Glu Asn Phe Thr Ser Val Ser Cys Lys Pro Pro Ser Pro Pro
 370 375 380

Pro Lys Ile Glu Arg Lys Phe Pro Pro Tyr Asn Gly Phe Gly Ser Glu
 385 390 395 400

Glu Asp Ser Leu Arg Asn Cys Ile Asp Leu Lys Pro Thr Pro His Arg
 405 410 415

Arg Asn Phe Lys Lys Phe Met Glu Lys Asp Ser Tyr Gly Ser Lys Ser
 Page 502

420					425					430					
Asn	Ile	Leu	Arg	Phe	Phe	Ala	Lys	Leu	Val	Thr	Asp	Lys	Cys	Val	Asp
		435					440					445			
Leu	Asp	Arg	Met	Phe	Val	Ile	Ser	Tyr	Tyr	Leu	Gly	Asp	Asp	Thr	Ile
	450					455					460				
Ser	Val	Phe	Glu	Pro	Ile	Glu	Arg	Asn	Ser	Gly	Ile	Ala	Gly	Gly	Met
465					470					475					480
Phe	Leu	Lys	Arg	Ser	Arg	Val	Lys	Lys	Pro	Gly	Gln	Glu	Val	Phe	Lys
				485					490					495	
Ser	Glu	Leu	Ser	Glu	Tyr	Ile	Lys	Ala	Glu	Glu	Leu	Tyr	Ile	Gly	Val
			500					505					510		
Thr	Val	Asn	Val	Asn	Gly	Tyr	Leu	Phe	Arg	Leu	Leu	Asn	Ala	Asp	Glu
		515					520					525			
Tyr	Thr	Leu	Asn	Tyr	Met	Glu	Gln	Asn	Thr	Asp	Lys	Tyr	Pro	Phe	Ser
	530					535					540				
Asn	Leu	Lys	Leu	Ala	Leu	Gln	Lys	Leu	Lys	Gln	Glu	Glu	Gly	Lys	Ser
545					550					555					560
Arg	Glu	Leu	Lys	Gln	Val	Phe	Lys	Ala	Ala	Asp	Ser	Lys	His	Thr	Asn
				565					570					575	
Met	Val	Asp	Tyr	Asn	Thr	Phe	Arg	Asp	Ile	Leu	Met	Ser	Leu	Thr	Val
			580					585					590		
Gly	Asn	Leu	Ala	Glu	Gln	Glu	Phe	Val	Thr	Ile	Ala	Arg	His	Tyr	Arg
		595					600					605			
Val	Pro	Glu	Gly	Thr	Cys	Ser	Asp	Met	Asp	Phe	Leu	Ile	Ala	Leu	Ala
	610					615					620				
His	Glu	Lys	Phe	Lys	Lys	Asn	Met	Phe	Glu	Asn	Phe	Asp	Thr	Phe	Ile
625					630					635					640
Tyr	Ser	Cys	Val	Tyr	Glu	Asp	Arg	Glu	Lys	Lys	Asn	Val	Leu	Pro	Thr
				645					650					655	
Lys	Asp	Ile	Lys	Arg	Leu	Cys	Lys	Ser	Ser	Arg	Leu	Pro	Leu	Ser	Asp
			660					665					670		
Asp	Leu	Leu	Glu	Ser	Leu	Leu	Ser	Arg	Phe	Glu	Asp	Ser	Glu	Lys	Gln

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675

680

685

Ile Asp Tyr Lys Ser Phe Phe Ser Ala Leu Asn Trp Arg Lys Asn Pro
690 695 700

Val Pro Glu Leu Gln Pro Ala Ser Tyr Leu Lys Glu Arg Cys Glu Asp
705 710 715 720

Val Trp Leu Gly Met Pro Ser Pro Ile Pro Ala Lys Tyr Ile Asp Tyr
725 730 735

Trp Thr Phe Leu Lys Asp Ala Phe Gly Leu Glu Glu Glu
740 745

<210> 187
<211> 588
<212> PRT
<213> Homo sapiens

<400> 187

Met Pro Gln Leu Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Gly Ser Ser Ala Gly Ala Ala Gly Gly Gly Asp Asp Leu
20 25 30

Gly Ala Asn Asp Glu Leu Ile Pro Phe Gln Asp Glu Gly Gly Glu Glu
35 40 45

Gln Glu Pro Ser Ser Asp Ser Ala Ser Ala Gln Arg Asp Leu Asp Glu
50 55 60

Val Lys Ser Ser Leu Val Asn Glu Ser Glu Asn Gln Ser Ser Ser Ser
65 70 75 80

Asp Ser Glu Ala Glu Arg Arg Pro Gln Pro Val Arg Asp Thr Phe Gln
85 90 95

Lys Pro Arg Asp Tyr Phe Ala Glu Val Arg Arg Pro Gln Asp Ser Ala
100 105 110

Phe Phe Lys Gly Pro Pro Tyr Pro Gly Tyr Pro Phe Leu Met Ile Pro
115 120 125

Asp Leu Ser Ser Pro Tyr Leu Ser Asn Gly Pro Leu Ser Pro Gly Gly
130 135 140

Ala Arg Thr Tyr Leu Gln Met Lys Trp Pro Leu Leu Asp Val Pro Ser
145 150 155 160

Ser Ala Thr Val Lys Asp Thr Arg Ser Pro Ser Pro Ala His Leu Ser
165 170 175

Asn Lys Val Pro Val Val Gln His Pro His His Met His Pro Leu Thr
180 185 190

Pro Leu Ile Thr Tyr Ser Asn Asp His Phe Ser Pro Gly Ser Pro Pro
195 200 205

Thr His Leu Ser Pro Glu Ile Asp Pro Lys Thr Gly Ile Pro Arg Pro
210 215 220

Pro His Pro Ser Glu Leu Ser Pro Tyr Tyr Pro Leu Ser Pro Gly Ala
225 230 235 240

Val Gly Gln Ile Pro His Pro Leu Gly Trp Leu Val Pro Gln Gln Gly
245 250 255

Gln Pro Met Tyr Ser Leu Pro Pro Gly Gly Phe Arg His Pro Tyr Pro
260 265 270

Ala Leu Ala Met Asn Ala Ser Met Ser Ser Leu Val Ser Ser Arg Phe
275 280 285

Ser Pro His Met Val Ala Pro Ala His Pro Gly Leu Pro Thr Ser Gly
290 295 300

Ile Pro His Pro Ala Ile Val Ser Pro Ile Val Lys Gln Glu Pro Ala
305 310 315 320

Pro Pro Ser Leu Ser Pro Ala Val Ser Val Lys Ser Pro Val Thr Val
325 330 335

Lys Lys Glu Glu Glu Lys Lys Pro His Val Lys Lys Pro Leu Asn Ala
340 345 350

Phe Met Leu Tyr Met Lys Glu Met Arg Ala Lys Val Val Ala Glu Cys
355 360 365

Thr Leu Lys Glu Ser Ala Ala Ile Asn Gln Ile Leu Gly Arg Lys Trp
370 375 380

His Asn Leu Ser Arg Glu Glu Gln Ala Lys Tyr Tyr Glu Leu Ala Arg
385 390 395 400

Lys Glu Arg Gln Leu His Ser Gln Leu Tyr Pro Thr Trp Ser Ala Arg
405 410 415

Asp Asn Tyr Gly Lys Lys Lys Lys Arg Lys Arg Glu Lys Gln Leu Ser
420 425 430

Gln Thr Gln Ser Gln Gln Gln Val Gln Glu Ala Glu Gly Ala Leu Ala
435 440 445

Ser Lys Ser Lys Lys Pro Cys Val Gln Tyr Leu Pro Pro Glu Lys Pro
450 455 460

Cys Asp Ser Pro Ala Ser Ser His Gly Ser Met Leu Asp Ser Pro Ala
465 470 475 480

Thr Pro Ser Ala Ala Leu Ala Ser Pro Ala Ala Pro Ala Ala Thr His
485 490 495

Ser Glu Gln Ala Gln Pro Leu Ser Leu Thr Thr Lys Pro Glu Thr Arg
500 505 510

Ala Gln Leu Ala Leu His Ser Ala Ala Phe Leu Ser Ala Lys Ala Ala
515 520 525

Ala Ser Ser Ser Gly Gln Met Gly Ser Gln Pro Pro Leu Leu Ser Arg
530 535 540

Pro Leu Pro Leu Gly Ser Met Pro Thr Ala Leu Leu Ala Ser Pro Pro
545 550 555 560

Ser Phe Pro Ala Thr Leu His Ala His Gln Ala Leu Pro Val Leu Gln
565 570 575

Ala Gln Pro Leu Ser Leu Val Thr Lys Ser Ala His
580 585

<210> 188
<211> 196
<212> PRT
<213> Homo sapiens
<400> 188

Met Ala Asp Gly Gln Met Pro Phe Ser Cys His Tyr Pro Ser Arg Leu
1 5 10 15

Arg Arg Asp Pro Phe Arg Asp Ser Pro Leu Ser Ser Arg Leu Leu Asp
20 25 30

Asp Gly Phe Gly Met Asp Pro Phe Pro Asp Asp Leu Thr Ala Ser Trp
35 40 45

Pro Asp Trp Ala Leu Pro Arg Leu Ser Ser Ala Trp Pro Gly Thr Leu
50 55 60

Arg Ser Gly Met Val Pro Arg Gly Pro Thr Ala Thr Ala Arg Phe Gly
65 70 75 80

Val Pro Ala Glu Gly Arg Thr Pro Pro Pro Phe Pro Gly Glu Pro Trp
85 90 95

Lys Val Cys Val Asn Val His Ser Phe Lys Pro Glu Glu Leu Met Val
100 105 110

Lys Thr Lys Asp Gly Tyr Val Glu Val Ser Gly Lys His Glu Glu Lys
115 120 125

Gln Gln Glu Gly Gly Ile Val Ser Lys Asn Phe Thr Lys Lys Ile Gln
130 135 140

Leu Pro Ala Glu Val Asp Pro Val Thr Val Phe Ala Ser Leu Ser Pro
145 150 155 160

Glu Gly Leu Leu Ile Ile Glu Ala Pro Gln Val Pro Pro Tyr Ser Thr
165 170 175

Phe Gly Glu Ser Ser Phe Asn Asn Glu Leu Pro Gln Asp Ser Gln Glu
180 185 190

Val Thr Cys Thr
195

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<211> 890
<212> PRT
<213> Homo sapiens

<400> 189

Met Glu Tyr Glu Trp Lys Pro Asp Glu Gln Gly Leu Gln Gln Ile Leu
1 5 10 15

Gln Leu Leu Lys Glu Ser Gln Ser Pro Asp Thr Thr Ile Gln Arg Thr
20 25 30

Val Gln Gln Lys Leu Glu Gln Leu Asn Gln Tyr Pro Asp Phe Asn Asn
35 40 45

Tyr Leu Ile Phe Val Leu Thr Lys Leu Lys Ser Glu Asp Glu Pro Thr
50 55 60

Arg Ser Leu Ser Gly Leu Ile Leu Lys Asn Asn Val Lys Ala His Phe
 65 70 75 80
 Gln Asn Phe Pro Asn Gly Val Thr Asp Phe Ile Lys Ser Glu Cys Leu
 85 90 95
 Asn Asn Ile Gly Asp Ser Ser Pro Leu Ile Arg Ala Thr Val Gly Ile
 100 105 110
 Leu Ile Thr Thr Ile Ala Ser Lys Gly Glu Leu Gln Asn Trp Pro Asp
 115 120 125
 Leu Leu Pro Lys Leu Cys Ser Leu Leu Asp Ser Glu Asp Tyr Asn Thr
 130 135 140
 Cys Glu Gly Ala Phe Gly Ala Leu Gln Lys Ile Cys Glu Asp Ser Ala
 145 150 155 160
 Glu Ile Leu Asp Ser Asp Val Leu Asp Arg Pro Leu Asn Ile Met Ile
 165 170 175
 Pro Lys Phe Leu Gln Phe Phe Lys His Ser Ser Pro Lys Ile Arg Ser
 180 185 190
 His Ala Val Ala Cys Val Asn Gln Phe Ile Ile Ser Arg Thr Gln Ala
 195 200 205
 Leu Met Leu His Ile Asp Ser Phe Ile Glu Asn Leu Phe Ala Leu Ala
 210 215 220
 Gly Asp Glu Glu Pro Glu Val Arg Lys Asn Val Cys Arg Ala Leu Val
 225 230 235 240
 Met Leu Leu Glu Val Arg Met Asp Arg Leu Leu Pro His Met His Asn
 245 250 255
 Ile Val Glu Tyr Met Leu Gln Arg Thr Gln Asp Gln Asp Glu Asn Val
 260 265 270
 Ala Leu Glu Ala Cys Glu Phe Trp Leu Thr Leu Ala Glu Gln Pro Ile
 275 280 285
 Cys Lys Asp Val Leu Val Arg His Leu Pro Lys Leu Ile Pro Val Leu
 290 295 300
 Val Asn Gly Met Lys Tyr Ser Asp Ile Asp Ile Ile Leu Leu Lys Gly
 305 310 315 320

Asp Val Glu Glu Asp Glu Thr Ile Pro Asp Ser Glu Gln Asp Ile Arg
 325 330 335
 Pro Arg Phe His Arg Ser Arg Thr Val Ala Gln Gln His Asp Glu Asp
 340 345 350
 Gly Ile Glu Glu Glu Asp Asp Asp Asp Asp Glu Ile Asp Asp Asp Asp
 355 360 365
 Thr Ile Ser Asp Trp Asn Leu Arg Lys Cys Ser Ala Ala Ala Leu Asp
 370 375 380
 Val Leu Ala Asn Val Tyr Arg Asp Glu Leu Leu Pro His Ile Leu Pro
 385 390 395 400
 Leu Leu Lys Glu Leu Leu Phe His His Glu Trp Val Val Lys Glu Ser
 405 410 415
 Gly Ile Leu Val Leu Gly Ala Ile Ala Glu Gly Cys Met Gln Gly Met
 420 425 430
 Ile Pro Tyr Leu Pro Glu Leu Ile Pro His Leu Ile Gln Cys Leu Ser
 435 440 445
 Asp Lys Lys Ala Leu Val Arg Ser Ile Thr Cys Trp Thr Leu Ser Arg
 450 455 460
 Tyr Ala His Trp Val Val Ser Gln Pro Pro Asp Thr Tyr Leu Lys Pro
 465 470 475 480
 Leu Met Thr Glu Leu Leu Lys Arg Ile Leu Asp Ser Asn Lys Arg Val
 485 490 495
 Gln Glu Ala Ala Cys Ser Ala Phe Ala Thr Leu Glu Glu Glu Ala Cys
 500 505 510
 Thr Glu Leu Val Pro Tyr Leu Ala Tyr Ile Leu Asp Thr Leu Val Phe
 515 520 525
 Ala Phe Ser Lys Tyr Gln His Lys Asn Leu Leu Ile Leu Tyr Asp Ala
 530 535 540
 Ile Gly Thr Leu Ala Asp Ser Val Gly His His Leu Asn Lys Pro Glu
 545 550 555 560
 Tyr Ile Gln Met Leu Met Pro Pro Leu Ile Gln Lys Trp Asn Met Leu
 565 570 575

Lys Asp Glu Asp Lys Asp Leu Phe Pro Leu Leu Glu Cys Leu Ser Ser
 580 585 590
 Val Ala Thr Ala Leu Gln Ser Gly Phe Leu Pro Tyr Cys Glu Pro Val
 595 600 605
 Tyr Gln Arg Cys Val Asn Leu Val Gln Lys Thr Leu Ala Gln Ala Met
 610 615 620
 Leu Asn Asn Ala Gln Pro Asp Gln Tyr Glu Ala Pro Asp Lys Asp Phe
 625 630 635 640
 Met Ile Val Ala Leu Asp Leu Leu Ser Gly Leu Ala Glu Gly Leu Gly
 645 650 655
 Gly Asn Ile Glu Gln Leu Val Ala Arg Ser Asn Ile Leu Thr Leu Met
 660 665 670
 Tyr Gln Cys Met Gln Asp Lys Met Pro Glu Val Arg Gln Ser Ser Phe
 675 680 685
 Ala Leu Leu Gly Asp Leu Thr Lys Ala Cys Phe Gln His Val Lys Pro
 690 695 700
 Cys Ile Ala Asp Phe Met Pro Ile Leu Gly Thr Asn Leu Asn Pro Glu
 705 710 715 720
 Phe Ile Ser Val Cys Asn Asn Ala Thr Trp Ala Ile Gly Glu Ile Ser
 725 730 735
 Ile Gln Met Gly Ile Glu Met Gln Pro Tyr Ile Pro Met Val Leu His
 740 745 750
 Gln Leu Val Glu Ile Ile Asn Arg Pro Asn Thr Pro Lys Thr Leu Leu
 755 760 765
 Glu Asn Thr Ala Ile Thr Ile Gly Arg Leu Gly Tyr Val Cys Pro Gln
 770 775 780
 Glu Val Ala Pro Met Leu Gln Gln Phe Ile Arg Pro Trp Cys Thr Ser
 785 790 795 800
 Leu Arg Asn Ile Arg Asp Asn Glu Glu Lys Asp Ser Ala Phe Arg Gly
 805 810 815
 Ile Cys Thr Met Ile Ser Val Asn Pro Ser Gly Val Ile Gln Asp Phe
 820 825 830

Ile Phe Phe Cys Asp Ala Val Ala Ser Trp Ile Asn Pro Lys Asp Asp
835 840 845

Leu Arg Asp Met Phe Cys Lys Ile Leu His Gly Phe Lys Asn Gln Val
850 855 860

Gly Asp Glu Asn Trp Arg Arg Phe Ser Asp Gln Phe Pro Leu Pro Leu
865 870 875 880

Lys Glu Arg Leu Ala Ala Phe Tyr Gly Val
885 890

<210> 190
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<213> Homo sapiens

<400> 190

Met Met Lys Thr Leu Leu Leu Phe Val Gly Leu Leu Leu Thr Trp Glu
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Ser Gly Gln Val Leu Gly Asp Gln Thr Val Ser Asp Asn Glu Leu Gln
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Glu Met Ser Asn Gln Gly Ser Lys Tyr Val Asn Lys Glu Ile Gln Asn
35 40 45

Ala Val Asn Gly Val Lys Gln Ile Lys Thr Leu Ile Glu Lys Thr Asn
50 55 60

Glu Glu Arg Lys Thr Leu Leu Ser Asn Leu Glu Glu Ala Lys Lys Lys
65 70 75 80

Lys Glu Asp Ala Leu Asn Glu Thr Arg Glu Ser Glu Thr Lys Leu Lys
85 90 95

Glu Leu Pro Gly Val Cys Asn Glu Thr Met Met Ala Leu Trp Glu Glu
100 105 110

Cys Lys Pro Cys Leu Lys Gln Thr Cys Met Lys Phe Tyr Ala Arg Val
115 120 125

Cys Arg Ser Gly Ser Gly Leu Val Gly Arg Gln Leu Glu Glu Phe Leu
130 135 140

Asn Gln Ser Ser Pro Phe Tyr Phe Trp Met Asn Gly Asp Arg Ile Asp
145 150 155 160

Ser Leu Leu Glu Asn Asp Arg Gln Gln Thr His Met Leu Asp Val Met
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170

175

Gln Asp His Phe Ser Arg Ala Ser Ser Ile Ile Asp Glu Leu Phe Gln
 180 185 190

Asp Arg Phe Phe Thr Arg Glu Pro Gln Asp Thr Tyr His Tyr Leu Pro
 195 200 205

Phe Ser Leu Pro His Arg Arg Pro His Phe Phe Phe Pro Lys Ser Arg
 210 215 220

Ile Val Arg Ser Leu Met Pro Phe Ser Pro Tyr Glu Pro Leu Asn Phe
 225 230 235 240

His Ala Met Phe Gln Pro Phe Leu Glu Met Ile His Glu Ala Gln Gln
 245 250 255

Ala Met Asp Ile His Phe His Ser Pro Ala Phe Gln His Pro Pro Thr
 260 265 270

Glu Phe Ile Arg Glu Gly Asp Asp Asp Arg Thr Val Cys Arg Glu Ile
 275 280 285

Arg His Asn Ser Thr Gly Cys Leu Arg Met Lys Asp Gln Cys Asp Lys
 290 295 300

Cys Arg Glu Ile Leu Ser Val Asp Cys Ser Thr Asn Asn Pro Ser Gln
 305 310 315 320

Ala Lys Leu Arg Arg Glu Leu Asp Glu Ser Leu Gln Val Ala Glu Arg
 325 330 335

Leu Thr Arg Lys Tyr Asn Glu Leu Leu Lys Ser Tyr Gln Trp Lys Met
 340 345 350

Leu Asn Thr Ser Ser Leu Leu Glu Gln Leu Asn Glu Gln Phe Asn Trp
 355 360 365

Val Ser Arg Leu Ala Asn Leu Thr Gln Gly Glu Asp Gln Tyr Tyr Leu
 370 375 380

Arg Val Thr Thr Val Ala Ser His Thr Ser Asp Ser Asp Val Pro Ser
 385 390 395 400

Gly Val Thr Glu Val Val Val Lys Leu Phe Asp Ser Asp Pro Ile Thr
 405 410 415

Val Thr Val Pro Val Glu Val Ser Arg Lys Asn Pro Lys Phe Met Glu
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420

425

430

Thr Val Ala Glu Lys Ala Leu Gln Glu Tyr Arg Lys Lys His Arg Glu
 435 440 445

Glu

<210> 191
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 <212> PRT
 <213> Homo sapiens

<400> 191

Met Tyr Gly Arg Asn Glu Leu Ile Ala Arg Tyr Ile Lys Leu Arg Thr
 1 5 10 15

Gly Lys Thr Arg Thr Arg Lys Gln Val Ser Ser His Ile Gln Val Leu
 20 25 30

Ala Arg Arg Lys Ala Arg Glu Ile Gln Ala Lys Leu Lys Asp Gln Ala
 35 40 45

Ala Lys Asp Lys Ala Leu Gln Ser Met Ala Ala Met Ser Ser Ala Gln
 50 55 60

Ile Ile Ser Ala Thr Ala Phe His Ser Ser Met Ala Leu Ala Arg Gly
 65 70 75 80

Pro Gly Arg Pro Ala Val Ser Gly Phe Trp Gln Gly Ala Leu Pro Gly
 85 90 95

Gln Ala Gly Thr Ser His Asp Val Lys Pro Phe Ser Gln Gln Thr Tyr
 100 105 110

Ala Val Gln Pro Pro Leu Pro Leu Pro Gly Phe Glu Ser Pro Ala Gly
 115 120 125

Pro Ala Pro Ser Pro Ser Ala Pro Pro Ala Pro Pro Trp Gln Gly Arg
 130 135 140

Ser Val Ala Ser Ser Lys Leu Trp Met Leu Glu Phe Ser Ala Phe Leu
 145 150 155 160

Glu Gln Gln Gln Asp Pro Asp Thr Tyr Asn Lys His Leu Phe Val His
 165 170 175

Ile Gly Gln Ser Ser Pro Ser Tyr Ser Asp Pro Tyr Leu Glu Ala Val
 180 185 190

Asp Ile Arg Gln Ile Tyr Asp Lys Phe Pro Glu Lys Lys Gly Gly Leu
 195 200 205
 Lys Asp Leu Phe Glu Arg Gly Pro Ser Asn Ala Phe Phe Leu Val Lys
 210 215 220
 Phe Trp Ala Asp Leu Asn Thr Asn Ile Glu Asp Glu Gly Ser Ser Phe
 225 230 235 240
 Tyr Gly Val Ser Ser Gln Tyr Glu Ser Pro Glu Asn Met Ile Ile Thr
 245 250 255
 Cys Ser Thr Lys Val Cys Ser Phe Gly Lys Gln Val Val Glu Lys Val
 260 265 270
 Glu Thr Glu Tyr Ala Arg Tyr Glu Asn Gly His Tyr Ser Tyr Arg Ile
 275 280 285
 His Arg Ser Pro Leu Cys Glu Tyr Met Ile Asn Phe Ile His Lys Leu
 290 295 300
 Lys His Leu Pro Glu Lys Tyr Met Met Asn Ser Val Leu Glu Asn Phe
 305 310 315 320
 Thr Ile Leu Gln Val Val Thr Asn Arg Asp Thr Gln Glu Thr Leu Leu
 325 330 335
 Cys Ile Ala Tyr Val Phe Glu Val Ser Ala Ser Glu His Gly Ala Gln
 340 345 350
 His His Ile Tyr Arg Leu Val Lys Glu
 355 360